

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Mike Hayes Examiner #: 74069 Date: 1/30/03  
Art Unit: 3763 Phone Number 30 5-5873 Serial Number: 9/456110  
Mail Box and Bldg/Room Location: CP2-~~308~~ Results Format Preferred (circle): PAPER DISK E-MAIL  
3-E-16

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method + System for treating stroke using hypothermia  
Inventors (please provide full names): see attached sheet  
Xiao Liao, Scott M Evans, William J. Worthen  
Earliest Priority Filing Date: 12/7/99

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

See attached sheet for claims to be searched and key words

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## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>JEANNE HERRIGAN</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>305-5934</u>	AA Sequence (#) _____	Dialog <input checked="" type="checkbox"/>
Searcher Location: <u>CP2-2008</u>	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>1/31</u>	Bibliographic <input checked="" type="checkbox"/>	Dr.Link _____
Date Completed: <u>2/3</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>191</u>	Fulltext <input checked="" type="checkbox"/>	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>94</u>	Other _____	Other (specify) _____

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200307  
(c) 2003 Thomson Derwent  
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)  
(c) 2003 JPO & JAPIO  
File 371:French Patents 1961-2002/BOPI 200209  
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	222	AU='LUO X'
S2	1	AU='LUO XIAOHUA'
S3	113	AU='XIA L'
S4	45	AU='EVANS S M'
S5	14	AU='WORTHEN W J'
S6	2	AU='WORTHERN W J'
S7	806	HYPOTHERMI? ?
S8	4	S1:S3 AND S4 AND S5:S6
S9	68	THERAP?(3N)COOLING
S10	375	S1:S6 NOT S8
S11	9	(S7 OR S9) AND S10

8/26, TI/3 (Item 3 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013760246

WPI Acc No: 2001-244458/200125

High intracranial pressure treating method for treating patient with head injury involves lowering patient's temperature by placing catheter in venous system of patient if patient's high ICP is detected

8/26, TI/4 (Item 4 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013726883

WPI Acc No: 2001-211113/200121

Introducer sheath for central venous line catheter comprises hollow body, barrier, and temperature sensor  
?t8/7/1,2

8/7/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014727624 \*\*Image available\*\*

WPI Acc No: 2002-548328/200258

Therapeutic cooling for patient, uses central venous catheter with heat-exchange properties controlled by e.g. inflatable balloon, including also Foley catheter improvement for cooling urinary tract

Patent Assignee: ALSIUS CORP (ALSI-N)

Inventor: EVANS S M ; LUO X ; PECOR R ; SHIMADA L M ; WALKER B ; WORTHERN W J

Number of Countries: 094 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258606	A1	20020801	WO 2001US2431	A	20010124	200258 B

Priority Applications (No Type Date): WO 2001US2431 A 20010124

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200258606	A1	E	30	A61F-007/12	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Abstract (Basic): WO.200258606 A1

NOVELTY - The inventive device comprises an introducer sheath for a central venous catheter having a sheath body and temperature sensor mounted distally on the body. The catheter or sheath contains a heat-exchange region through which coolant is circulated, the coolant temperature being controlled in response to signals from the temperature sensor. The system also includes heat-exchange catheters for arterial dialysis and jugular vein cooling, and an improved Foley catheter for heat-exchange cooling via a patient's urinary tract.

USE - For cooling a patient's blood temperature, and hence ameliorating possible fever 'spikes'.

ADVANTAGE - Improves healing for patients suffering from severe brain trauma or ischemia resulting from stroke/heart attack, such protective short-term hypothermia being particularly applicable for patients undergoing minimally invasive heart/aneurysm surgery, the inventive system applying to patients already intubated with central venous catheters for other purposes, thus adding a blood-cooling catheter would require no additional surgery to be carried out.

DESCRIPTION OF DRAWING(S) - The drawing illustrates an exploded view in perspective of a first embodiment of the inventive system for cooling using a venous catheter.

Therapeutic catheter system (10)

Coolant supply line, and (14)

Return line (16)

Catheter (18)

Sheath, having (42)

Hollow body and (42A)

Side port (43)

Proximal end (44)

Distal end (46)

Barrier for sealing after catheter introduction (48)

Temperature sensor, connected to (50)

Cooling system via (12)

Cable, wireless or fibreoptic connection through wall of sheath 12 (52)

pp; 30 DwgNo 1/9

Derwent Class: P32; P34

International Patent Class (Main): A61F-007/12

International Patent Class (Additional): A61M-025/10

8/7/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013924194 \*\*Image available\*\*

WPI Acc No: 2001-408407/200143

**Treating stroke patients involves inducing hypothermia using heat exchange catheter**

Patent Assignee: ALSIUS CORP (ALSI-N); EVANS S M (EVAN-I); LUO X (LUOX-I); WORTHEN W J (WORT-I)

Inventor: EVANS S M ; LUO X ; WORTHEN W J ; LUO Z

Number of Countries: 094 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200141708	A2	20010614	WO 2000US42676	A	20001207	200143 B
AU 200147136	A	20010618	AU 200147136	A	20001207	200161
US 20020022823	A1	20020221	US 99456110	A	19991207	200221
			US 2001900619	A	20010706	
US 20020032430	A1	20020314	US 99456110	A	19991207	200222
			US 2001900378	A	20010706	

Priority Applications (No Type Date): US 99456110 A 19991207; US 2001900619 A 20010706; US 2001900378 A 20010706

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200141708 A2 E 23 A61K-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200147136 A A61K-000/00 Based on patent WO 200141708

US 20020022823 A1 H05B-001/00 Div ex application US 99456110

US 20020032430 A1 A61M-031/00 Div ex application US 99456110

Abstract (Basic): WO 200141708 A2

NOVELTY - Treating stroke patients comprises:

- (1) identifying a stroke patient (12) for treatment;
- (2) advancing a heat exchange catheter into the patient, and
- (3) inducing hypothermia using heat exchange catheter.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a therapeutic system (10) for treating a stroke patient which comprises at least cooling catheter (18) having a heat exchange region (24) on a

distal portion and at least one blood pressure probe to provide indication of the patient's blood pressure.

USE - Used for treating stroke patients.

ADVANTAGE - The method is easy to use and requires minimal added work for medical personnel.

DESCRIPTION OF DRAWING(S) - The drawing the cooling system.

Therapeutic system (10)

Patient (12)

Cooling catheter (18)

Heat exchange region (24)

pp; 23 DwgNo 1/4

Derwent Class: B05; B07; P32; P34

International Patent Class (Main): A61K-000/00; A61M-031/00; H05B-001/00

International Patent Class (Additional): A61F-007/12

11/26, TI/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014835336

WPI Acc No: 2002-656042/200270

Patient's cardiac arrest treatment involves inducing hypothermia in patient, after subjecting patient to resuscitation

11/26, TI/2 (Item 2 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014835334

WPI Acc No: 2002-656040/200270

Patient warming method for hypothermia treatment and prevention, involves increasing patient's body core temperature by managing electromagnetic energy characteristics based on sensed bodily properties of patients

11/26, TI/3 (Item 3 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014624100

WPI Acc No: 2002-444804/200247

Heat exchange vascular catheter for warming blood and dispelling hypothermia has electrodes that generates an electric field that radiates heat

11/26, TI/4 (Item 4 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014086271

WPI Acc No: 2001-570485/200164

Therapeutic hypothermia establishing kit e.g. for treating brain trauma and brain ischemia such as that caused by cardiac arrest by inducing hypothermia in patient

same  
inv.  
data ng.

11/26, TI/5 (Item 5 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013564874

WPI Acc No: 2001-049081/200106

Treating cardiac arrest by defibrillating and/or ventilating patient by administering epinephrine to resuscitate and cooling patient using cooling catheter positioned in central venous system

11/26, TI/6 (Item 6 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013547314

WPI Acc No: 2001-031520/200104

Kit for lowering and maintaining temperature of patient, has catheters of different cooling capacity for placement in patient's circulatory system

11/26, TI/7 (Item 7 from file: 350)  
DIALOG(R) File 350: Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

013531683

WPI Acc No: 2001-015889/200102

**Heat exchange catheter for therapeutic cooling of patients has coolant supply and return lumens in contact with heat exchange membranes**

11/26, TI/8 (Item 8 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013361014

WPI Acc No: 2000-532953/200048

**Hyperthermic catheter for treating body fluid in body conduit has shaft with heat exchange region at distal end, this region including balloon receiving remotely cooled heat exchange fluid**

11/26, TI/9 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

013052288

WPI Acc No: 2000-224143/200019

**Indwelling heat exchange catheter useful for hypothermic treatment of body fluid e.g. blood comprises an inner tube in an outer tube and hollow fibers**

?t11/7/4, 6, 7, 9

11/7/4 (Item 4 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

014086271 \*\*Image available\*\*

WPI Acc No: 2001-570485/200164

**Therapeutic hypothermia establishing kit e.g. for treating brain trauma and brain ischemia such as that caused by cardiac arrest by inducing hypothermia in patient**

Patent Assignee: ALSIUS CORP (ALSI-N)

Inventor: WORTHEN W J

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200156517	A1	20010809	WO 2001US3576	A	20010202	200164 B
AU 200133296	A	20010814	AU 200133296	A	20010202	200173
US 6460544	B1	20021008	<del>US 99266452</del>	A	19990311	200269
			US 2000498499	A	20000204	

6,458/150  
no dbl.  
pat.

Priority Applications (No Type Date): US 2000498499 A 20000204; US 99266452 A 19990311

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200156517 A1 E 14 A61F-007/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200133296 A A61F-007/00 Based on patent WO 200156517

US 6460544 B1 A61B-019/00 CIP of application US 99266452

Abstract (Basic): WO 200156517 A1

NOVELTY - The kit has a high cooling capacity catheter which is advanced into the patient's central venous system to quickly cool the patient to, e.g., 32 degrees C. Once **hypothermia** has been

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
 IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW  
 AU 200037343 A A61F-007/00 Based on patent WO 200053135  
 DE 10084338 T A61F-007/00 Based on patent WO 200053135  
 US 6432124 B1 A61F-007/00 Cont of application US 99266452  
 US 20020120314 A1 A61F-007/00 CIP of application US 9863984

Cont of application US 9863984  
 CIP of application US 99253109  
 CIP of application US 99266452  
 Cont of application US 99375079  
 CIP of application US 2000503014  
Cont of application US 2000565039  
 CIP of patent US 6126684  
 Cont of patent US 6126684  
 Cont of patent US 6149670  
 CIP of patent US 6409747

US 6454793 B1 A61F-007/00 Cont of application US 99266452  
 US 6458150 B1 A61F-007/00 CIP of application US 99253109

Abstract (Basic): WO 200053135 A1

NOVELTY - The kit has catheters that have fluid circulation passageways connected to a coolant source, and are configured for placement in the patient's circulatory system. One catheter has a cooling capacity that is less than the cooling capacity of the other catheter.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the establishment and maintenance of desired temperature in a patient.

USE - Used in **cooling** patients for **therapeutic** purposes. For treating brain trauma and brain ischemia by inducing **hypothermia** in a patient.

ADVANTAGE - Recognizes that a patient requiring **hypothermia** preferably be cooled down rapidly at a rate of two degrees or more an hour. Has central venous catheter that facilitates uses other than just cooling and which can be used to replace high capacity catheter to maintain desired temperature.

DESCRIPTION OF DRAWING(S) - The figure shows the flowchart for establishing and maintaining **hypothermia** in a patient.

pp; 15 DwgNo 3/3

Derwent Class: P32; S05

International Patent Class (Main): A61F-007/00

International Patent Class (Additional): A61F-007/00

11/7/7 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013531683 \*\*Image available\*\*

WPI Acc No: 2001-015889/200102

**Heat exchange catheter for therapeutic cooling of patients has coolant supply and return lumens in contact with heat exchange membranes**

Patent Assignee: ALSIUS CORP (ALSI-N); ALIBERTO A C (ALIB-I); EVANS S M (EVAN-I); WORTHEN W J (WORT-I)

Inventor: ALIBERTO A C; EVANS S M; WORTHEN W J

Number of Countries: 091 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200066053	A1	20001109	WO 2000US12137	A	20000504	200102 B
AU 200046988	A	20001117	AU 200046988	A	20000504	200111
US 20010010011	A1	20010726	US 99305613	A	19990505	200146
			US 2001800706	A	20010307	
EP 1180005	A1	20020220	EP 2000928808	A	20000504	200221
			WO 2000US12137	A	20000504	
US 6368304	B1	20020409	US 99253109	A	19990219	200227
			US 99305613	A	19990505	
US 20020066458	A1	20020606	US 9863984	A	19980421	200241
			US 99253109	A	19990219	



US 99305613 A 19990505  
US 200257334 A 20020123

Priority Applications (No Type Date): US 99305613 A 19990505; US 2001800706 A 20010307; US 99253109 A 19990219; US 9863984 A 19980421; US 200257334 A 20020123

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200066053 A1 E 24 A61F-007/12

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200046988 A A61F-007/12 Based on patent WO 200066053

US 20010010011 A1 A61F-007/00 Cont of application US 99305613

EP 1180005 A1 E A61F-007/12 Based on patent WO 200066053

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

US 6368304 B1 A61F-007/12 CIP of application US 99253109

US 20020066458 A1 A61F-007/12 CIP of application US 9863984

CIP of application US 99253109

Div ex application US 99305613

Abstract (Basic): WO 200066053 A1

NOVELTY - Heat exchange catheter with a coolant supply and return membranes which communicate with first and second heat exchange membranes (66,68) arranged along the distal end of the catheter. These form a closed loop heat exchanger for cooling and/or warming a patient.

DETAILED DESCRIPTION - The catheter is made of a urethane and is anchored in position in the body. It may also include a drug delivery lumen and a guide wire lumen. A connector manifold (44) defines a series of channels, each establishing a pathway for fluid communication between a connector line and respective lumen. Preferably a drug delivery port (64) is formed between the two heat exchange membranes.

INDEPENDENT CLAIMS are also included for the following:

(a) a method for making a heat exchange catheter; and

(b) a method of treating a patient by advancing the catheter into the patient and circulating coolant through it while preventing direct infusion of the coolant directly into the patient's blood stream.

USE - For treating a patient suffering from severe brain trauma or from ischemia caused by a stroke or heart attack. It may also be used to help patients undergoing minimally invasive heart surgery and aneurysm surgery.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the cooling catheter.

connector manifold (44)

drug delivery port (64)

heat exchange membranes (66,68)

pp; 24 DwgNo 1/4

Derwent Class: A25; A96; B07; P31; P32; P34

International Patent Class (Main): A61F-007/00; A61F-007/12

International Patent Class (Additional): A61B-019/00; A61M-025/00;

A61M-025/16; A61M-025/18; A61M-039/00; A61M-039/10

11/7/9 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

013052288 \*\*Image available\*\*

WPI Acc No: 2000-224143/200019

**Indwelling heat exchange catheter useful for hypothermic treatment of body fluid e.g. blood comprises an inner tube in an outer tube and hollow fibers**

Patent Assignee: ALSIUS INC (ALSI-N); EVANS S M (EVAN-I); JONES M L

(JONE-I); NODA W A (NODA-I); WALKER B D (WALK-I); WORTHEN W J (WORT-I);  
UNIV CALIFORNIA (REGC ); GOBIN Y P (GOBI-I); ALSIUS CORP (ALSI-N)  
Inventor: **EVANS S M** ; GOBIN P; JONES M L; NODA W A; WALKER B D; **WORTHEN W J** ; GOBIN Y P

Number of Countries: 073 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200009054	A1	20000224	WO 99US8455	A	19990416	200019 B
AU 9936500	A	20000306	AU 9936500	A	19990416	200030
EP 1104273	A1	20010606	EP 99918635	A	19990416	200133
			WO 99US8455	A	19990416	
US 6338727	B1	20020115	US 98133813	A	19980813	200208
US 20020049409	A1	20020425	US 98133813	A	19980813	200233
			US 2001946835	A	20010904	
US 20020049410	A1	20020425	US 98133813	A	19980813	200233
			US 2001946969	A	20010904	
US 20020156421	A1	20021024	US 9863984	A	19980421	200273
			US 98133813	A	19980813	
			US 2001167619	A	20011019	
US 20020161331	A1	20021031	US 9863984	A	19980421	200274
			US 98133813	A	19980813	
			US 200195755	A	20011019	

Priority Applications (No Type Date): US 98133813 A 19980813; US 2001946835  
A 20010904; US 2001946969 A 20010904; US 9863984 A 19980421; US  
2001167619 A 20011019; US 200195755 A 20011019

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200009054	A1	E	64	A61F-007/12	
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU  
CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV  
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US  
UZ VN

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
MC NL PT SE

AU 9936500	A			A61F-007/12	Based on patent WO 200009054
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EP 1104273	A1	E		A61F-007/12	Based on patent WO 200009054
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Designated States (Regional): AT BE CH DE DK ES FI FR GB IE IT LI NL PT  
SE

US 6338727	B1			A61F-007/12	
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US 20020049409	A1			A61F-007/12	Cont of application US 98133813
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US 20020049410	A1			A61F-007/12	Div ex application US 98133813
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US 20020156421	A1			A61F-007/12	CIP of application US 9863984
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Cont of application US 98133813

CIP of patent US 6126684

Cont of patent US 6338727

US 20020161331	A1			A61F-007/12	CIP of application US 9863984
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Cont of application US 98133813

CIP of patent US 6126684

Cont of patent US 6338727

Abstract (Basic): WO 200009054 A1

NOVELTY - Catheter comprises an inner tube (125) disposed in a first lumen (130) of an outer tube (121). The inner tube has a second lumen (127). Portions of the inner tube define a first fluid flow path extending along the second lumen. Portions of the outer tube and inner tube define a second flow path extending between the outer and inner tubes. Hollow fibers provide fluid communication between the first and second fluid flow paths.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for methods of making and operating a heat exchange catheter.

USE - To produce **hypothermia** typically in a selected portion of the body without varying the temperature of the remaining portions of the body e.g. it can be disposed in the carotid artery where the arterial blood flowing to the brain can be cooled.

ADVANTAGE - Selective **hypothermia**, treatment of the brain captures the advantages of **hypothermia** during operative procedures associated

with the brain without also capturing the disadvantages of **hypothermia** with respect to other areas of the body. A multiple balloon design enables the flow and temperature of the heat exchange fluid to be more easily controlled along the entire length of the heat exchange region and the ability of the catheter to bend and flex when placed in a curved vasculature. The hollow fibers can be provided with micropores which permit the leaching of such clot inhibiting pharmaceuticals as heparinized saline which could also serve as heat exchange fluid.

DESCRIPTION OF DRAWING(S) - The drawing shows a catheter.

Outer tube (121)

Inner tube (125)

Second lumen (127)

First lumen (130)

pp; 64 DwgNo 9/37

Derwent Class: B07; D22; P31; P32; P34

International Patent Class (Main): A61F-007/12

International Patent Class (Additional): A61B-018/04; A61F-007/00;

A61M-003/00; A61M-025/00; H05B-007/12

File 348:EUROPEAN PATENTS 1978-2003/Jan W04

(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030130,UT=20030123

(c) 2003 WIPO/Univentio

Set	Items	Description
S1	8	AU='LUO XIA'
S2	41	AU='EVANS SCOTT M'
S3	22	AU='WORTHEN WILLIAM J'
S4	10	PN=(WO 200009054 OR WO 200258606 OR WO 200141708 OR WO 200- 156517 OR WO 200053135 OR WO 200066053)
S5	2	PN=(EP 1104273 OR EP 1180005)
S6	6	S1 AND S2 AND S3
S7	5	S6 NOT S4:S5
S8	28	S1:S3 NOT S4:S6
S9	1407	HYPOTHERMI? ?
S10	5	S8 AND S9

7/3,AB/1 (Item 1 from file: 348) *duplicate*  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2003 European Patent Office. All rts. reserv.

01312949

**METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA**  
**PROCEDE ET SYSTEME DE TRAITEMENT D'ACCIDENT VASCULAIRE CEREBRALE EN**  
**UTILISANT L'HYPOTHERMIE**

PATENT ASSIGNEE:

Alsius Corporation, (2758731), Suite 150, 15770 Laguna Canyon Road,  
Irvine, California 92618, (US), (Applicant designated States: all)

INVENTOR:

LUO, Xia , 5869 West 74th Street, Los Angeles, CA 90045, (US)  
EVANS, Scott, M. , 1252 Country Hills Drive, Santa Ana, CA 92705, (US)  
WORTHEN, William, J. , 37 Oakbrook, Coto de Caza, CA 92679, (US)

PATENT (CC, No, Kind, Date):

WO 2001041708 010614

APPLICATION (CC, No, Date): EP 2000992869 001207; WO 2000US42676 001207

PRIORITY (CC, No, Date): US 456110 991207

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;

LU; MC; NL

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61K-006/00

LANGUAGE (Publication,Procedural,Application): English; English; English

7/3,AB/2 (Item 2 from file: 348) *duplicate of 7/3,AB/4 (see next page)*  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2003 European Patent Office. All rts. reserv.

01277399

**METHOD AND SYSTEM FOR TREATING HIGH INTRACRANIAL PRESSURE USING HYPOTHERMIA**  
**PROCEDE ET SYSTEME DESTINES AU TRAITEMENT PAR HYPOTHERMIE DE LA PRESSION**  
**INTRACRANIEUNE ELEVEE**

PATENT ASSIGNEE:

Alsius Corporation, (2758731), Suite 150, 15770 Laguna Canyon Road,  
Irvine, California 92618, (US), (Applicant designated States: all)

INVENTOR:

LUO, Xia , 5869 W. 74th, Los Angeles, CA 90045, (US)  
EVANS, Scott, M. , 1252 Country Hills Drive, Santa Ana, CA 92705, (US)  
WORTHEN, William, J. , 37 Oakbrook, Coto De Caza, CA 92679, (US)

PATENT (CC, No, Kind, Date):

WO 2001017471 010315

APPLICATION (CC, No, Date): EP 2000961573 000905; WO 2000US24404 000905

PRIORITY (CC, No, Date): US 390600 990903

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;

LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61F-007/12

LANGUAGE (Publication,Procedural,Application): English; English; English

7/3,AB/3 (Item 3 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2003 European Patent Office. All rts. reserv.

01269443

**CENTRAL VENOUS CATHETER WITH HEAT EXCHANGE PROPERTIES**  
**ZENTRALVENOSER KATHETER MIT WARMETAUSCHEIGENSCHAFTEN**  
**CATHETER VEINEUX CENTRAL POSSEDANT DES PROPRIETES D'ECHANGE THERMIQUE**

PATENT ASSIGNEE:

Alsius Corporation, (2758731), Suite 150, 15770 Laguna Canyon Road,  
Irvine, California 92618, (US), (Applicant designated States: all)

INVENTOR:

SHIMADA, Lynn, M., 7906 E. Deerfield Lane, Orange, CA 92869, (US)  
WORTHEN, William, J. , 37 Oakbrook, Coto de Caza, CA 92679, (US)  
EVANS, Scott, M. , 1252 County Hills Drive, Santa Ana, CA 92705, (US)

LUO, Xia , 5869 W. 74th, Los Angeles, CA 90045, (US)  
PECOR, Robert, 9 Woodcrest Lane, Aliso Viejo, CA 92656, (US)  
WALKER, Blair, 24742 San Doval Lane, Mission Viejo, CA 92691, (US)  
LEGAL REPRESENTATIVE:  
Shortt, Peter Bernard (35852), TOMKINS & CO., 5 Dartmouth Road, Dublin 6,  
(IE)  
PATENT (CC, No, Kind, Date): EP 1204368 A1 020515 (Basic)  
WO 200112061 010222  
APPLICATION (CC, No, Date): EP 2000968972 000816; WO 2000US40654 000816  
PRIORITY (CC, No, Date): US 376524 990818  
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE  
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI  
INTERNATIONAL PATENT CLASS: A61B-005/00; A61M-025/00  
NOTE:  
No A-document published by EPO  
LANGUAGE (Publication,Procedural,Application): English; English; English

7/3,AB/4 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00784309

**METHOD AND SYSTEM FOR TREATING HIGH INTRACRANIAL PRESSURE USING HYPOTHERMIA  
PROCEDE ET SYSTEME DESTINES AU TRAITEMENT PAR HYPOTHERMIE DE LA PRESSION  
INTRACRANIEUNE ELEVEE**

Patent Applicant/Assignee:

ALSUS CORPORATION, 15770 Laguna Canyon Road, Suite 150, Irvine, CA 92618  
, US, US (Residence), US (Nationality), (For all designated states  
except: US)

Patent Applicant/Inventor:

LUO Xia , 5869 W. 74th, Los Angeles, CA 90045, US, US (Residence), US  
(Nationality), (Designated only for: US)

EVANS Scott M , 1252 Country Hills Drive, Santa Ana, CA 92705, US, US  
(Residence), US (Nationality), (Designated only for: US)

WORTHEN William J , 37 Oakbrook, Coto De Caza, CA 92679, US, US  
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

ALONZO Arlyn L (agent), Alsus Corporation, Suite 150, 15770 Laguna  
Canyon Road, Irvine, CA 92618, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200117471 A1 20010315 (WO 0117471)

Application: WO 2000US24404 20000905 (PCT/WO US0024404)

Priority Application: US 99390600 19990903

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK

DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 3096

**English Abstract**

A method for treating high ICP includes inducing mild or moderate hypothermia in the patient using one or more closed loop heat exchange catheters positioned in the patient's central venous system when the patient's ICP is above a predetermined threshold. Additional steps for lowering ICP can also be undertaken, e.g., infusing sedatives, paralytics, diuretics, or barbiturates into the patient and/or draining excess CSF fluid and/or hyperventilating the patient.

**French Abstract**

L'invention concerne un procede destine au traitement de la pression

intracranienne elevee consistant a effectuer une hypothermie faible ou moderee chez un patient a l'aide d'un ou de plusieurs catheters echangeurs de chaleur en circuit ferme positionnes dans le systeme veineux central lorsque la pression intracranienne du patient depasse un seuil predetermine. Pour abaisser la pression intracranienne, on peut egalement effectuer des etapes supplementaires, comme par exemple, pratiquer une perfusion de solute contenant des sedatifs, des paralynants, des diuretiques, ou des barbituriques chez un patient et/ou drainer le liquide cephalo-rachidien et/ou hyperventiler le patient.

7/3,AB/5 (Item 2 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2003 WIPO/Univentio. All rts. reserv.

00778878

**CENTRAL VENOUS CATHETER WITH HEAT EXCHANGE PROPERTIES**  
**CATHETER VEINEUX CENTRAL POSSEDANT DES PROPRIETES D'ECHANGE THERMIQUE**

Patent Applicant/Assignee:

ALSIUS CORPORATION, 15770 Laguna Canyon Road, Suite 150, Irvine, CA 92618  
, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

SHIMADA Lynn M, 7906 E. Deerfield Lane, Orange, CA 92869, US, US  
(Residence), US (Nationality), (Designated only for: US )

WORTHEN William J , 37 Oakbrook, Coto de Caza, CA 92679, US, US  
(Residence), US (Nationality), (Designated only for: US )

EVANS Scott M , 1252 County Hills Drive, Santa Ana, CA 92705, US, US  
(Residence), US (Nationality), (Designated only for: US )

LUO Xia , 5869 W. 74th, Los Angeles, CA 90045, US, US (Residence), US  
(Nationality), (Designated only for: US )

PECOR Robert, 9 Woodcrest Lane, Aliso Viejo, CA 92656, US, US (Residence)  
, US (Nationality), (Designated only for: US )

WALKER Blair, 24742 San Doval Lane, Mission Viejo, CA 92691, US, US  
(Residence), US (Nationality), (Designated only for: US )

Legal Representative:

ALONZO Arlyn L, Alsius Corporation, Suite 150, 15770 Laguna Canyon Road,  
Irvine, CA 92618, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200112061 A1 20010222 (WO 0112061)

Application: WO 2000US40654 20000816 (PCT/WO US0040654)

Priority Application: US 99376524 19990818

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK  
DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 5387

**English Abstract**

An introducer sheath (42) for a central venous catheter (54) includes a sheath body (56) and a temperature sensor (80) mounted distally on the body (56).

10/6/1 (Item 1 from file: 348)  
01268639

METHOD AND SYSTEM FOR TREATING CARDIAC ARREST USING HYPOTHERMIA  
PROCEDE ET SYSTEME DE TRAITEMENT DE L'ARRET CARDIAQUE PAR HYPOTHERMIE  
LANGUAGE (Publication,Procedural,Application): English; English; English

10/6/2 (Item 1 from file: 349)  
00816075 \*\*Image available\*\*

METHOD AND SYSTEM FOR TREATING CARDIAC ARREST  
PROCEDE ET SYSTEME DE TRAITEMENT DE L'ARRET CARDIAQUE  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 5011  
Publication Year: 2001

10/6/3 (Item 2 from file: 349)  
00797162 \*\*Image available\*\*

DUAL BALLOON CENTRAL VENOUS LINE CATHETER TEMPERATURE CONTROL SYSTEM  
SYSTEME DE REGULATION DE TEMPERATURE POUR CATHETER VEINEUX CENTRAL A DEUX  
BALLONNETS  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 7980  
Publication Year: 2001

10/6/4 (Item 3 from file: 349)  
00778932 \*\*Image available\*\*

METHOD AND SYSTEM FOR TREATING CARDIAC ARREST USING HYPOTHERMIA  
PROCEDE ET SYSTEME DE TRAITEMENT DE L'ARRET CARDIAQUE PAR HYPOTHERMIE  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 3274  
Publication Year: 2001

10/6/5 (Item 4 from file: 349)  
00749746 \*\*Image available\*\*

CATHETER WITH MULTIPLE HEATING/COOLING FIBERS EMPLOYING FIBER SPREADING  
FEATURES  
CATHETER POURVU DE MULTIPLES FIBRES DE CHAUFFAGE REFROIDISSEMENT UTILISANT  
DES ELEMENTS DE MISE EN PLACE DES FIBRES  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 11642  
Publication Year: 2000



File 155:MEDLINE(R) 1966-2003/Jan W4  
 File 5:Biosis Previews(R) 1969-2003/Jan. W4  
     (c) 2003 BIOSIS  
 File 73:EMBASE 1974-2003/Jan W4  
     (c) 2003 Elsevier Science B.V.  
 File 34:SciSearch(R) Cited Ref Sci 1990-2003/Jan W4  
     (c) 2003 Inst for Sci Info  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
     (c) 1998 Inst for Sci Info

Set	Items	Description
S1	599	AU='LUO X'
S2	13	AU='LUO XIA'
S3	390	AU='EVANS S M'
S4	308	AU='EVANS SM'
S5	180	AU='EVANS S.M.'
S6	14	AU='EVANS SCOTT M'
S7	11	AU='WORTHEN WILLIAM J'
S8	1	S2 AND S6 AND S7 <i>too recent</i>
S9	233	CENTRAL()VENOUS()CATHETER? AND (STROKE OR CEREBROVASCULAR(- )ACCIDENT OR ISCHEMI? ? OR APOPLEXY)
S10	1505	S1:S7 NOT S8
S11	0	S10 AND S9
S12	814575	STROKE OR (CEREBROVASCULAR OR VASCULAR)()ACCIDENT? ? OR IS- CHEMI? ? OR APOPLEXY
S13	76298	HYPOTHERMI? ?
S14	44	S10 AND S12
S15	11	S10 AND S13
S16	5	S14 AND S15
S17	3	RD (unique items)

11/26, TI/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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013924194

WPI Acc No: 2001-408407/200143

Treating stroke patients involves inducing hypothermia using heat  
exchange catheter

*Same inv. assigned*



11/26, TI/2 (Item 2 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

012687919

WPI Acc No: 1999-494028/199941

Vasodilating composition used to stimulate blood flow and treat vascular  
insufficiency

established, the high capacity catheter is removed and replaced with a lower cooling capacity catheter which maintains a desired reduced temperature.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method for establishing and maintaining a predetermined temperature in a patient

USE - For **cooling** patients for **therapeutic** purposes. For treating brain trauma and brain ischemia such as that caused by cardiac arrest by inducing **hypothermia** in a patient

ADVANTAGE - The lower capacity catheter can be configured as a central venous catheter for permitting catheter to be used for multiple functions. Alternatively, high cooling capacity catheter can be used to attenuate a fever and lower the patient's body temperature to normal, with the lower capacity catheter being used to maintain normal body temperature.

DESCRIPTION OF DRAWING(S) - The figure shows a flow chart of the invention for establishing and maintaining **hypothermia** in a patient.

pp; 14 DwgNo 3/4

Derwent Class: P31; P32

International Patent Class (Main): A61B-019/00; A61F-007/00

11/7/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013547314 \*\*Image available\*\*

WPI Acc No: 2001-031520/200104

**Kit for lowering and maintaining temperature of patient, has catheters of different cooling capacity for placement in patient's circulatory system**

Patent Assignee: ALSIUS CORP (ALSI-N); EVANS S M (EVAN-I); WALKER B D

(WALK-I)

Inventor: **EVANS S M** ; WORTHEN W; WALKER B D; BALDING D; WINTER S C;

**WORTHEN W J**

Number of Countries: 090 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200053135	A1	20000914	WO 2000US6187	A	20000309	200104 B
AU 200037343	A	20000928	AU 200037343	A	20000309	200105
DE 10084338	T	20020425	DE 1084338	A	20000309	200235
			WO 2000US6187	A	20000309	
US 6432124	B1	20020813	US 99266452	A	19990311	200255
			US 2000565039	A	20000503	
US 20020120314	A1	20020829	US 9863984	A	19980421	200259
			US 9863984	A	19980421	
			US 99253109	A	19990219	
			US 99266452	A	19990311	
			US 99375079	A	19990816	
			US 2000503014	A	20000211	
			US 2000565039	A	20000503	
			US 200261488	A	20020201	
US 6454793	B1	20020924	US 99266452	A	19990311	200266
			US 2000703791	A	20001102	
US 6458150	B1	20021001	US 99253109	A	19990219	200268
			US 99266452	A	19990311	

Priority Applications (No Type Date): US 99266452 A 19990311; US 2000565039 A 20000503; US 9863984 A 19980421; US 99253109 A 19990219; US 99375079 A 19990816; US 2000503014 A 20000211; US 200261488 A 20020201; US 2000703791 A 20001102

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200053135 A1 E 15 A61F-007/00

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

17/6/2 (Item 1 from file: 5)  
13828751 BIOSIS NO.: 200200457572  
Indwelling heat exchange catheter and method of using same.  
2002

17/6/3 (Item 1 from file: 34)  
04599596 Genuine Article#: TV955 Number of References: 35  
Title: THE ROLE OF GLUTAMIC-ACID IN THE PATHOGENESIS OF STROKE AND THE  
DEVELOPMENT OF NEUROPROTECTIVE DRUGS (Abstract Available)  
?t17/7/1,3

17/7/1 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

10514459 20035606 PMID: 10569121  
Retrograde transvenous perfusion. *Author aut.*  
Frazee J G; Luo X  
Division of Neurosurgery, University of California Los Angeles, School of  
Medicine, USA.  
Critical care clinics (UNITED STATES) Oct 1999, 15 (4) p777-88, vii,  
ISSN 0749-0704 Journal Code: 8507720  
Document type: Clinical Trial; Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed  
Serious consequences of **stroke** dictate that new approaches to the  
treatment of **stroke** be investigated. We have developed a method for  
perfusing the patient's own arterial blood retrograde through the venous  
system to **ischemic** brain tissue. This treatment has proven beneficial in  
preventing and reversing serious injury in the laboratory and in a small  
clinical trial. The laboratory investigation has also demonstrated that  
this therapy, retrograde transvenous neuroperfusion, can be coupled with  
**hypothermia** to potentially increase its benefit. History, experimental  
development, and the clinical trial are reviewed in this article.  
Record Date Created: 19991228

17/7/3 (Item 1 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

04599596 Genuine Article#: TV955 Number of References: 35  
Title: THE ROLE OF GLUTAMIC-ACID IN THE PATHOGENESIS OF STROKE AND THE  
DEVELOPMENT OF NEUROPROTECTIVE DRUGS  
Author(s): EVANS SM ; ADDAE JI  
Corporate Source: UWI, FAC MED SCI, DEPT PHYSIOL/ST AUGUSTINE//TRINID &  
TOBAGO/  
Journal: WEST INDIAN MEDICAL JOURNAL, 1995, V44, N4 (DEC), P119-123  
ISSN: 0043-3144  
Language: ENGLISH Document Type: REVIEW  
Abstract: The role of glutamic acid (glutamate) in the pathogenesis of  
**stroke** is now fairly well established. As a result, many drugs which  
act on glutamate receptors are currently under investigation for their  
ability to prevent the damage induced by glutamate under ischaemic  
conditions. The efficacy of these compounds in protecting central  
neurones from the effects of **stroke** may be indicative of the  
importance of the role that glutamate plays in this process.

?t17/7/3

17/7/3 (Item 1 from file: 34)  
DIALOG(R) File 34:(c) 2003 Inst for Sci Info. All rts. reserv.

Title: THE ROLE OF GLUTAMIC-ACID IN THE PATHOGENESIS OF STROKE AND THE  
DEVELOPMENT OF NEUROPROTECTIVE DRUGS  
Author(s): EVANS SM ; ADDAE JI  
Abstract: The role of glutamic acid (glutamate) in the pathogenesis of

**stroke** is now fairly well established. As a result, many drugs which act on glutamate receptors...

- ...ischaemic conditions. The efficacy of these compounds in protecting central neurones from the effects of **stroke** may be indicative of the importance of the role that glutamate plays in this process.
- ...Identifiers--RAT HIPPOCAMPAL SLICE; CEREBRAL-ARTERY OCCLUSION; SPINAL-CORD NEURONS; EXTRACELLULAR RELEASE; **ISCHEMIA**; CALCIUM; PROTECTION; MK-801; RECEPTORS; AGONIST
- ...Research Fronts: INHIBITION; INTRACELLULAR  $Ca^{2+}$  CONCENTRATION)
- 94-3387 001 (TEMPORARY MIDDLE CEREBRAL-ARTERY OCCLUSION IN RATS; THERAPEUTIC **HYPOTHERMIA** ; TRANSIENT FOCAL **ISCHEMIA** ; NEURONAL DAMAGE VOLUME; DELAYED INDUCTION)
- 94-4035 001 (N-METHYL-D-ASPARTATE RECEPTOR-MEDIATED GLUTAMATE...

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200307  
(c) 2003 Thomson Derwent  
File 344:Chinese Patents Abs Aug 1985-2002/Dec  
(c) 2003 European Patent Office  
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)  
(c) 2003 JPO & JAPIO  
File 371:French Patents 1961-2002/BOPI 200209  
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	99417	STROKE OR STROKES OR TIA
S2	1509	(CEREBROVASCULAR OR VASCULAR) ( )ACCIDENT? ? OR APOPLEXY
S3	7699	ISCHEMI? ?
S4	821	HYPOTHERMI?
S5	894394	COOLING OR COOL OR COOLS OR COOLED
S6	10669	(BLOOD OR ARTERIAL) ( )PRESSURE
S7	25343	CATHETER?
S8	654	CENTRAL ( ) (VEIN OR VENOUS) OR VENA ( )CAVA
S9	47119	HEAT ( )EXCHANGE
S10	42	S1:S3 AND S4:S5 AND S6
S11	2	S7 AND S10
S12	1	S8 AND S10
S13	0	S12 NOT S11
S14	1	S9 AND S10
S15	0	S14 NOT S11
S16	19869	IC=A61K-000/00
S17	3772	IC=A61M-031/00
S18	716	IC=A61F-007/12
S19	1907	IC=H05B-001/00
S20	1	S16 AND S17 AND S18 AND S19
S21	0	S20 NOT S11
S22	3	S10 AND S16:S19
S23	1	S22 NOT S11

23/7/1 (Item 1 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

012976720 \*\*Image available\*\*  
WPI Acc No: 2000-148570/200014

**New heterocyclyl-substituted fused pyrazole derivatives, used for treating cardiovascular disorders such as hypertension, thromboembolic disease or ischemia**

Patent Assignee: BAYER AG (FARB )  
Inventor: ALONSO-ALIJA C; DEMBOWSKY K; FEURER A; HUETTER J; PERZBOM E;  
STAHL E; STASCH J; STRAUB A; DEMBOWSKY K; PERZBORN E; HUTTER J  
Number of Countries: 087 Number of Patents: 015

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 19834044	A1	20000203	DE 1034044	A	19980729	200014 B
WO 200006569	A1	20000210	WO 99EP5074	A	19990716	200016
AU 9952840	A	20000221	AU 9952840	A	19990716	200029
BR 9912562	A	20010502	BR 9912562	A	19990716	200129
			WO 99EP5074	A	19990716	
NO 200100149	A	20010326	WO 99EP5074	A	19990716	200130
			NO 2001149	A	20010109	
EP 1102768	A1	20010530	EP 99938273	A	19990716	200131
			WO 99EP5074	A	19990716	
CZ 200100333	A3	20010613	WO 99EP5074	A	19990716	200138
			CZ 2001333	A	19990716	
SK 200100130	A3	20010806	WO 99EP5074	A	19990716	200157
			SK 2001130	A	19990716	
ZA 200100222	A	20011031	ZA 2001222	A	20010109	200173
CN 1317005	A	20011010	CN 99810504	A	19990716	200207
KR 2001085314	A	20010907	KR 2001701215	A	20010129	200218
MX 2001000991	A1	20010901	MX 2001991	A	20010126	200239
HU 200103815	A2	20020729	WO 99EP5074	A	19990716	200258
			HU 20013815	A	19990716	
JP 2002521483	W	20020716	WO 99EP5074	A	19990716	200261
			JP 2000562371	A	19990716	
AU 751316	B	20020815	AU 9952840	A	19990716	200264

Priority Applications (No Type Date): DE 1034044 A 19980729

Patent Details:

Patent No	Kind	Lang	Pg	Main IPC	Filing Notes
DE 19834044	A1		36	C07D-231/12	
WO 200006569	A1	G		C07D-471/04	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN					
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ					
LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK					
SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR					
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9952840	A			C07D-471/04	Based on patent WO 200006569
BR 9912562	A			C07D-471/04	Based on patent WO 200006569
NO 200100149	A			C07D-471/04	
EP 1102768	A1	G		C07D-471/04	Based on patent WO 200006569
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT					
LI LT LU LV MC MK NL PT RO SE SI					
CZ 200100333	A3			C07D-471/04	Based on patent WO 200006569
SK 200100130	A3			C07D-471/04	Based on patent WO 200006569
ZA 200100222	A		157	A61K-000/00	
CN 1317005	A			C07D-471/04	
KR 2001085314	A			C07D-471/04	
MX 2001000991	A1			A61K-031/435	
HU 200103815	A2			C07D-471/04	Based on patent WO 200006569
JP 2002521483	W		134	C07D-471/04	Based on patent WO 200006569
AU 751316	B			C07D-471/04	Previous Publ. patent AU 9952840
					Based on patent WO 200006569

Abstract (Basic): DE 19834044 A1

NOVELTY - 1-(Cyclic substituted methyl) 3-heterocyclyl 4,5-fused pyrazole derivatives (I) are new.

DETAILED DESCRIPTION - Pyrazole derivatives of formula (I) and their isomers and salts are new.

R1=saturated or aromatic 5- or 6-membered heterocyclyl (containing 1-3 of O, S and N and optionally bonded via N), optionally substituted by a very wide range of specific groups;

R2 + R3=group completing a phenyl ring or a 6-membered saturated or aromatic heterocycle (containing 1-3 of N, O and S), optionally substituted by a wide range of specific groups;

A=5- or 6-membered saturated or aromatic heterocycle (containing 1-3 of N, O and S), optionally substituted by a wide range of specific groups.

Full definitions are given in the 'DEFINITIONS - Full Definitions' field.

ACTIVITY - Thrombolytic; hypotensive; cardiant; antianginal; antiarrhythmic; vasotropic; cerebroprotective; antiarteriosclerotic; gynecological; uropathic.

3-(4-Amino-5-methylsulfonyl-pyrimidin-2-yl)-1-(2-fluorobenzyl)-1H-pyrazolo (3,4-b) pyridine (Ia) had IC50 0.23 microM for aortic relaxation.

MECHANISM OF ACTION - Soluble guanyl cyclase stimulant; intracellular cyclic guanosine monophosphate (cGMP) level increasing agent. (I) also potentiate the activity of other agents which increase cGMP levels, e.g. endothelium derived relaxing factor (EDRF), nitrogen monoxide donors, protoporphyrin IX, arachidonic acid or phenylhydrazine derivatives.

USE - (I) cause vascular relaxation, inhibit thrombocyte aggregation, reduce **blood pressure** and increase coronary blood flow. They are used for treating cardiovascular disorders (claimed), e.g. hypertension, cardiac insufficiency, angina pectoris, peripheral or cardiac vascular disease, arrhythmia, thromboembolic disease or **ischemia** (claimed) (e.g. myocardial infarction, cerebral **stroke**, transitory **ischemic** attacks, peripheral blood flow disorders or restenosis), arteriosclerosis or diseases of the urogenital system (e.g. prostate hypertrophy, erectile dysfunction, female sexual dysfunction or incontinence).

pp; 36 DwgNo 0/0

Derwent Class: B02; B03

International Patent Class (Main): **A61K-000/00** ; A61K-031/435; C07D-231/12 ; C07D-471/04

International Patent Class (Additional): A61K-031/437; A61K-031/44; A61K-031/4439; A61K-045/00; A61P-007/02; A61P-009/00; A61P-009/10; A61P-009/12; A61P-015/00; A61P-015/08; A61P-029/00; A61P-043/00; C07D-221/00; C07D-221-00; C07D-231/00; C07D-487/04; C07D-491/113; C07D-231-02; C07D-471/04; C07D-231-00



File 348:EUROPEAN PATENTS 1978-2003/Jan W04

(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030130,UT=20030123

(c) 2003 WIPO/Univentio

Set	Items	Description
S1	60683	STROKE OR STROKES OR TIA
S2	1055	(CEREBROVASCULAR OR VASCULAR) ()ACCIDENT? ? OR APOPLEXY
S3	14360	ISCHEMI? ?
S4	1433	HYPOTHERMI?
S5	271739	COOLING OR COOL OR COOLS OR COOLED
S6	14170	(BLOOD OR ARTERIAL) ()PRESSURE
S7	28511	CATHETER?
S8	3863	CENTRAL() (VEIN OR VENOUS) OR VENA()CAVA
S9	16110	HEAT() EXCHANGE
S10	91	IC=A61K-000/00
S11	883	IC=A61M-031/00
S12	224	IC=A61F-007/12
S13	118	IC=H05B-001/00
S14	0	S10 AND S11 AND S12 AND S13
S15	0	1 : S3
S16	272414	S4:S5
S17	0	1:S3(S) S4:S5(S) S6
S18	14	S1:S3(S) S4:S5(S) S6
S19	1	S18 AND S10:S13
S20	13	S18 NOT S19

19/6,PN/1 (Item 1 from file: 349)  
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

*duplicate of 8/7/2 in inventor section  
of results*

00808543

METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA

PROCEDE ET SYSTEME DE TRAITEMENT D'ACCIDENT VASCULAIRE CEREBRALE EN

UTILISANT L'HYPOTHERMIE

Patent and Priority Information (Country, Number, Date):

Patent: WO 200141708 A2-A3 20010614 (WO 0141708)

Publication Language: English

Filing Language: English

Fulltext Word Count: 5477

Publication Year: 2001

20/6/1 (Item 1 from file: 348)  
00751959

**COMMUNICATION METHOD AND APPARATUS THEREFOR  
KOMMUNIKATIONSVERFAHREN UND VORRICHTUNG DAFUR  
PROCEDE ET APPAREIL DE COMMUNICATION**

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

**FULLTEXT AVAILABILITY:**

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9941	456
CLAIMS B	(German)	9941	488
CLAIMS B	(French)	9941	497
SPEC B	(English)	9941	4391
Total word count - document A			0
Total word count - document B			5832
Total word count - documents A + B			5832

20/6/2 (Item 2 from file: 348)  
00536333

**Adenosine kinase inhibitors**

**Adenosinkinaseinhibitoren**

**Inhibiteurs de kinase d'adenosine**

LANGUAGE (Publication,Procedural,Application): English; English; English

**FULLTEXT AVAILABILITY:**

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9948	2762
CLAIMS B	(German)	9948	2694
CLAIMS B	(French)	9948	3401
SPEC B	(English)	9948	20492
Total word count - document A			0
Total word count - document B			29349
Total word count - documents A + B			29349

20/6/3 (Item 1 from file: 349)  
00958376 \*\*Image available\*\*

**SHOCK TREATMENT SYSTEMS AND METHODS**

**SYSTEMES ET PROCEDES DE TRAITEMENT DE L'ETAT DE CHOC**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 25183

Publication Year: 2002

20/6/4 (Item 2 from file: 349)  
00761648 \*\*Image available\*\*

**INTRAVASCULAR SYSTEMS FOR CORPOREAL COOLING**

**SYSTEMES INTRAVASCULAIRES DE REFROIDISSEMENT CORPOREL**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 4905

Publication Year: 2000

20/6/5 (Item 3 from file: 349)  
00495307

**COMBINATION OF AN ALDOSE REDUCTASE INHIBITOR AND A GLYCOGEN PHOSPHORYLASE  
INHIBITOR**

**COMBINAISON D'UN INHIBITEUR DE REDUCTASE D'ALDOSE ET D'UN INHIBITEUR DE  
PHOSPHORYLASE DE GLYCOGENE**

Publication Language: English

Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 34830  
Publication Year: 1999

20/6/6 (Item 4 from file: 349)  
00466287

COMPOUNDS ACTIVE AT A NOVEL SITE ON RECEPTOR-OPERATED CALCIUM CHANNELS  
USEFUL FOR TREATMENT OF NEUROLOGICAL DISORDERS AND DISEASES  
COMPOSES ACTIFS SUR UN NOUVEAU SITE DES CANAUX CALCIQUES ACTIVES PAR LES  
RECEPTEURS SERVANT AU TRATITEMENT DES TROUBLES ET DES MALADIES  
NEUROLOGIQUES

Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 63266  
Publication Year: 1998

20/6/7 (Item 5 from file: 349)  
00416281 \*\*Image available\*\*

PEPTIDES FOR TREATMENT OF INFLAMMATION AND SHOCK  
PEPTIDES SERVANT A TRAITER DES ETATS D'INFLAMMATION ET DE CHOC

Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims

Fulltext Word Count: 10984  
Publication Year: 1998

20/6/8 (Item 6 from file: 349)  
00405766

COUMPOUNDS ACTIVE AT A NOVEL SITE ON RECEPTOR-OPERATED CALCIUM CHANNELS  
USEFUL FOR TREATMENT OF NEUROLOGICAL DISORDERS AND DISEASES  
COMPOSES AGISSANT SUR UN NOUVEAU SITE DES CANAUX A CALCIUM ACTIVES PAR  
RECEPTEUR ET UTILES POUR TRAITER DES TROUBLES ET DES MALADIES  
NEUROLOGIQUES

Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 64042  
Publication Year: 1997

20/6/9 (Item 7 from file: 349)  
00356871 \*\*Image available\*\*

SUBSTITUTED N-(INDOLE-2-CARBONYL-) AMIDES AND DERIVATIVES AS GLYCOGEN  
PHOSPHORYLASE INHIBITORS  
(INDOLE-2-CARBONYL-)-AMIDES SUBSTITUES EN N ET LEURS DERIVES, SERVANT  
D'INHIBITEURS DE LA GLYCOGENE PHOSPHORYLASE

Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 40038  
Publication Year: 1996

20/6/10 (Item 8 from file: 349)  
00356870 \*\*Image available\*\*

SUBSTITUTED N-(INDOLE-2-CARBONYL)-GLYCINAMIDES AND DERIVATIVES AS GLYCOGEN  
PHOSPHORYLASE INHIBITORS

**(INDOLE-2-CARBONYL-)-GLYCINAMIDES SUBSTITUES EN N ET LEURS DERIVES, SERVANT  
D'INHIBITEURS DE LA GLYCOGENE PHOSPHORYLASE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 54267

Publication Year: 1996

20/6/11 (Item 9 from file: 349)

00234568

**METHODS FOR THE TREATMENT OF NEURONAL DAMAGE ASSOCIATED WITH ISCHEMIA,  
HYPOXIA OR NEURODEGENERATION**

**TRAITEMENTS DE LESIONS NEURONALES LIEES A L'ISCHEMIE, A L'HYPOXIE OU A LA  
DEGENERESCENCE NEURONALE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 10989

Publication Year: 1993

20/6/12 (Item 10 from file: 349)

00215500

**ADENOSINE KINASE INHIBITORS**

**INHIBITEURS DE L'ADENOSINE-KINASE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 30453

Publication Year: 1992

20/6/13 (Item 11 from file: 349)

00205021

**AICA RIBOSIDE ANALOGS**

**ANALOGUES D'AICA RIBOSIDE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 32601

Publication Year: 1992

?t20/3,k/3,4,11

20/3,K/3 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00958376 \*\*Image available\*\*

**SHOCK TREATMENT SYSTEMS AND METHODS**

**SYSTEMES ET PROCEDES DE TRAITEMENT DE L'ETAT DE CHOC**

Patent Applicant/Assignee:

CPRX LLC, 4330 Upton Avenue South, Minneapolis, MN 55410, US, US

(Residence), US (Nationality)

Inventor(s):

LURIE Keith G, 4751 Girard Avenue South, Minneapolis, MN 55409, US,

ZIELINSKI Todd M, 3549 43rd Ave. South, Minneapolis, MN 55406, US,

Legal Representative:

GIBBY Darin J (et al) (agent), Townsend and Townsend and Crew LLP, Two

Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200292169 A1 20021121 (WO 0292169)

Application: WO 2002US14039 20020501 (PCT/WO US0214039)

Priority Application: US 2001854238 20010511; US 2002 20020408  
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO  
RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English  
Filing Language: English  
Fulltext Word Count: 25183

Fulltext Availability: ..  
Detailed Description

#### Detailed Description

... a process may be used to treat a variety of conditions where the person's **blood pressure** is low. For example, such a procedure may be used where the person has low **blood pressure** due to blood loss, due ...to a high gravitational state, due to vasodepressor syncope, due to drowning, due to heat **stroke**, due to heart attack, due to **hypothermia**, due to right heart failure, after a return to earth from space, due to sepsis...

20/3,K/4 (Item 2 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2003 WIPO/Univentio. All rts. reserv.

00761648 \*\*Image available\*\*

#### INTRAVASCULAR SYSTEMS FOR CORPOREAL COOLING SYSTEMES INTRAVASCULAIRES DE REFROIDISSEMENT CORPOREL

Patent Applicant/Assignee:

THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK, 116th Street  
and Broadway, New York, NY 10027, US, US (Residence), US (Nationality),  
(For all designated states except: US)

Patent Applicant/Inventor:

SCHWARTZ Arthur E, 393 Gloucester Street, Englewood, NJ 07631, US, US  
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Legal Representative:

DIPPERT William H, Cowan, Liebowitz & Latman, P.C., 1133 Avenue of the  
Americas, New York, NY 10036-6799, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200074749 A1 20001214 (WO 0074749)  
Application: WO 2000US15751 20000608 (PCT/WO US0015751)  
Priority Application: US 99330428 19990608

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LS LT LU LV MD MG  
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ  
VN YU ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English  
Filing Language: English  
Fulltext Word Count: 4905

Fulltext Availability:  
Detailed Description

#### Detailed Description

... flow rate  
and/or pressure of the cooled blood should be adjusted so  
that the **blood pressure** in the **stroke** patient's internal  
carotid artery is slightly greater than systemic **blood**

pressure .

In a preferred embodiment of the invention the brain cooling is administered in conjunction with...

20/3,K/11 (Item 9 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00234568

**METHODS FOR THE TREATMENT OF NEURONAL DAMAGE ASSOCIATED WITH ISCHEMIA,  
HYPOXIA OR NEURODEGENERATION  
TRAITEMENTS DE LESIONS NEURONALES LIEES A L'ISCHEMIE, A L'HYPOXIE OU A LA  
DEGENERESCENCE NEURONALE**

Patent Applicant/Assignee:

SYNTEX-SYNERGEN NEUROSCIENCE JOINT VENTURE,  
THE GENERAL HOSPITAL CORPORATION,  
ALPS Brian J,  
BROWN Christine Mary,  
COLLINS Franklin D,  
EMMETT Caroline J,  
SPEDDING Michael,  
RUSSELL Deborah,  
FINKLESTEIN Seth P,  
MOSKOWITZ Michael A,  
WHITING Roger Lewis,

Inventor(s):

ALPS Brian J,  
BROWN Christine Mary,  
COLLINS Franklin D,  
EMMETT Caroline J,  
SPEDDING Michael,  
RUSSELL Deborah,  
FINKLESTEIN Seth P,  
MOSKOWITZ Michael A,  
WHITING Roger Lewis,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9308828 A1 19930513

Application: WO 92US9618 19921106 (PCT/WO US9209618)

Priority Application: US 91734 19911108

Designated States: AT AU BB BG BR CA CH CS DE DK ES FI GB HU JP KP KR LK LU  
MG MN MW NL NO PL RO RU SD SE US AT BE CH DE DK ES FR GB GR IE IT LU MC  
NL SE BF BJ CF CG CI CM GA GN ML MR SN TD TG

Publication Language: English

Fulltext Word Count: 10989

Fulltext Availability:

Detailed Description

Detailed Description

... Data for the blood pressure in the rat is  
presented in Table 2.

TABLE 2

**BLOOD PRESSURE** (SYSTOLIC/DIASTOLIC BP) (mmHg  
IN RATS SUBJECTED TO 10 MIN FOREBRAIN **ISCHEMIA** ,  
Group Starting Pre-occlusion Peak Pressor Isoelectric R  
BP BP BP EEG

P

Drug@ \*8508...8 92,0+13,2

\*systolic

\*\*diastolic

Rectal body temperatures measured at the end of  
**ischemia** were acceptable, with no evidence of  
**hypothermia** nor hyperthermia, The mean drug-treated  
animal temperature was 37,7 + 0.12oC and for...

...unaffected by the procedure in either group, where the drug-treated animals showed a pre- **ischemia** value of  $7,5 \pm 0.2$  mM and post- **ischemia** value of  $7,0 \pm 0,3$  mM, and where these respective values for vehicle controls...in oxygen. The right femoral artery and vein were cannulated for monitoring of mean arterial **blood pressure** (MABP; Gould RS3200 **Blood Pressure** Monitor, Gould Inc., Valley View, OH), drug delivery, and blood sampling, Animals were then paralyzed...

...hematocrit were measured at least twice during surgery and the immediate post operative period, The **stroke** volume and rate of the ventilator was adjusted to maintain PaO<sub>2</sub> between 100-200 mmHg...

...36-37°C with a homeothermic blanket control unit (Harvard Bioscience, South Natick, MA), Focal **ischemic** infarcts were made in the right lateral cerebral cortex in the territory of the middle cerebral artery (MCA) by the method of Chen, et al, **Stroke**, 17:738-743, 1986, Both common carotid arteries were exposed by midline ventral incision. The...

...was made at the junction of the zygoma and squamosal bone using a dental drill **cooled** with saline. Using a dissecting microscope, the dura was opened with fine forceps, and the...



Set	Items	Description
S1	6	HYPOTHERMI? ? (S)CENTRAL() (VEIN OR VENOUS) (3N)CATHETER? (S- ) (STROKE OR ISCHEMI? ?)

1/6/1

00816075    \*\*Image available\*\*

**METHOD AND SYSTEM FOR TREATING CARDIAC ARREST**

**PROCEDE ET SYSTEME DE TRAITEMENT DE L'ARRET CARDIAQUE**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5011

Publication Year: 2001

1/6/2

00808543    \*\*Image available\*\*

**METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA**

**PROCEDE ET SYSTEME DE TRAITEMENT D'ACCIDENT VASCULAIRE CEREBRALE EN**

**UTILISANT L'HYPOTHERMIE**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5477

Publication Year: 2001

1/6/3

00778932    \*\*Image available\*\*

**METHOD AND SYSTEM FOR TREATING CARDIAC ARREST USING HYPOTHERMIA**

**PROCEDE ET SYSTEME DE TRAITEMENT DE L'ARRET CARDIAQUE PAR HYPOTHERMIE**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 3274

Publication Year: 2001

1/6/4

00761022

**APPARATUS AND METHOD FOR ADVANCING COOLING CATHETER**

**SYSTEME ET PROCEDE POUR FAIRE AVANCER UN CATHETER DE REFROIDISSEMENT**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 2443

Publication Year: 2000

1/6/5

00744796    \*\*Image available\*\*

**TEMPERATURE PROBE AND INTERCONNECT CABLE FOR HYPOTHERMIA CATHETER**

**TEMPERATURE FEEDBACK**

**SONDE THERMIQUE ET CABLE D'INTERCONNEXION POUR RETROACTION THERMIQUE DE**

**CATHETER D'HYPOTHERMIE**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 4418

Publication Year: 2000

1/6/6  
00740117      \*\*Image available\*\*  
METHOD AND APPARATUS FOR ESTABLISHING AND MAINTAINING THERAPEUTIC  
HYPOTHERMIA  
PROCEDE ET APPAREIL PERMETTANT D'EFFECTUER ET DE MAINTENIR UNE HYPOTHERMIE  
A DES FINS THERAPEUTIQUES  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
    Detailed Description  
    Claims  
Fulltext Word Count: 3095  
Publication Year: 2000  
?t1/3,k/2,4,5,6

1/3,K/2  
DIALOG(R)File 349:PCT FULLTEXT  
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*duplicate*

00808543      \*\*Image available\*\*  
METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA  
PROCEDE ET SYSTEME DE TRAITEMENT D'ACCIDENT VASCULAIRE CEREBRALE EN  
UTILISANT L'HYPOTHERMIE  
Patent Applicant/Assignee:  
    ALSIUS CORPORATION, Suite 150, 15770 Laguna Canyon Road, Irvine, CA 92618  
    , US, US (Residence), US (Nationality), (For all designated states  
    except: US)  
Patent Applicant/Inventor:  
    LUO Xia, 5869 West 74th Street, Los Angeles, CA 90045, US, US (Residence)  
    , US (Nationality), (Designated only for: US)  
    EVANS Scott M, 1252 Country Hills Drive, Santa Ana, CA 92705, US, US  
    (Residence), US (Nationality), (Designated only for: US)  
    WORTHEN William J, 37 Oakbrook, Coto de Caza, CA 92679, US, US  
    (Residence), US (Nationality), (Designated only for: US)  
Legal Representative:  
    KREBS Robert E (agent), Burns, Doane, Swecker & Mathis, LLP, P.O. Box  
    1404, Alexandria, VA 22313-1404, US,  
Patent and Priority Information (Country, Number, Date):  
    Patent:                   WO 200141708 A2-A3 20010614 (WO 0141708)  
    Application:            WO 2000US42676 20001207 (PCT/WO US0042676)  
    Priority Application: US 99456110 19991207  
Parent Application/Grant:  
    Related by Continuation to: US 99456110 19991207 (CON)  
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ  
    DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
    LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
    SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
    (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
    (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
    (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
    (EA) AM AZ BY KG KZ MD RU TJ TM  
Publication Language: English  
Filing Language: English  
Fulltext Word Count: 5477

Fulltext Availability:  
    Detailed Description

#### English Abstract

A method for treating **stroke** patients includes inducing mild or moderate hypothermia in a patient using one or more closed...  
...and/or brain temperature are above predetermined thresholds. Additional steps for treating and managing a **stroke** patient can also be undertaken, e.g., infusing paralytics, infusing neuro-protectants, infusing anti-clot and/or clot lysis medications, performing neuro-protection procedures, performing non- **catheter** -based **hypothermia**

, performing angioplasty, deploying stent, removing clot(s), maintaining a predetermined ICP level such as draining...

#### Detailed Description

... vena cava of the central venous system. Moreover, since many patients already are intubated with **central venous catheters** for other clinically approved purposes, providing a **central venous catheter** that can also cool the blood requires no additional surgical procedures for those patients. A cooling **central venous catheter** is disclosed in the present assignee's co-pending U.

S. Pat. Applications Serial Nos...

...stroke, and in response. lowering the patient's temperature using at least one heat exchange **catheter** placed in the **central venous** system of the patient. In another embodiment, a heat exchange catheter is placed through the...

1/3,K/4

DIALOG(R) File 349:PCT FULLTEXT

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00761022

#### APPARATUS AND METHOD FOR ADVANCING COOLING CATHETER

#### SYSTEME ET PROCEDE POUR FAIRE AVANCER UN CATHETER DE REFROIDISSEMENT

Patent Applicant/Assignee:

ALSIUS CORPORATION, Suite 150, 15770 Laguna Canyon Road, Irvine, CA 92618  
, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

WALKER Blair D, 24742 San Doval Lane, Mission Viejo, CA 92691, US, US  
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Legal Representative:

ALONZO Arlyn L, Alsius Corporation, Suite 150, 15770 Laguna Canyon Road,  
Irvine, CA 92618, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200072779 A2 20001207 (WO 0072779)

Application: WO 2000US14782 20000526 (PCT/WO.US0014782)

Priority Application: US 99321350 19990527

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK

DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 2443

Fulltext Availability:

Detailed Description

#### Detailed Description

... of which are incorporated herein by reference, the above-mentioned advantages in treating brain trauma/ **ischemic** patients by cooling can also be realized by cooling the patient's entire body, i...

...advantage of systemic hypothermia is that, as recognized by the present assignee, to induce systemic **hypothermia** a cooling **catheter** or other cooling device need not be advanced into the blood supply of the brain...

1/3,K/5

DIALOG(R) File 349:PCT FULLTEXT

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00744796 \*\*Image available\*\*

**TEMPERATURE PROBE AND INTERCONNECT CABLE FOR HYPOTHERMIA CATHETER  
TEMPERATURE FEEDBACK**

**SONDE THERMIQUE ET CABLE D'INTERCONNEXION POUR RETROACTION THERMIQUE DE  
CATHETER D'HYPOTHERMIE**

Patent Applicant/Assignee:

ALSIUS CORPORATION, 15770 Laguna Canyon Road, Suite 150, Irvine, CA 92618  
, US, US (Residence), US (Nationality), (For all designated states  
except: US)

Patent Applicant/Inventor:

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Legal Representative:

ALONZO Arlyn L, Alsius Corporation, Suite 150, 15770 Laguna Canyon Road,  
Irvine, CA 92618, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200057823 A1 20001005 (WO 0057823)

Application: WO 2000US7936 20000324 (PCT/WO US0007936)

Priority Application: US 99282971 19990331

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK

DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 4418

Fulltext Availability:

Detailed Description

Detailed Description

... the present assignee and incorporated herein by reference, the  
abovementioned advantages in treating brain trauma/ **ischemic** patients by  
cooling can also be realized by cooling the patient's entire body, i...

...advantage of systemic hypothermia is that, as recognized by the present  
assignee, to induce systemic **hypothermia** a cooling **catheter** or other  
cooling device need not be advanced into the blood supply of the brain...

1/3,K/6

DIALOG(R) File 349:PCT FULLTEXT

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*a duplicate*

00740117 \*\*Image available\*\*

**METHOD AND APPARATUS FOR ESTABLISHING AND MAINTAINING THERAPEUTIC  
HYPOTHERMIA**

**PROCEDE ET APPAREIL PERMETTANT D'EFFECTUER ET DE MAINTENIR UNE HYPOTHERMIE  
A DES FINS THERAPEUTIQUES**

Patent Applicant/Assignee:

ALSIUS CORPORATION, Suite 150, 15770 Laguna Canyon Road, Irvine, CA 92618  
, US, US (Residence), US (Nationality), (For all designated states  
except: US)

Patent Applicant/Inventor:

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(Residence), US (Nationality), (Designated only for: US)

WORTHEN William J, 37 Oakbrook, Coto de Caza, CA 92679, US, US

(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

ALONZO Arlyn L (agent), Alsius Corporation, Suite 150, 15770 Laguna  
Canyon Road, Irvine, CA 92618, US,

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200307

(c) 2003 Thomson Derwent

Set	Items	Description
51	1	HYPOTHERMI? ? (S)CENTRAL() (VEIN OR VENOUS) (3N)CATHETER? (S- ) (STROKE OR ISCHEMI? ?) <i>a duplicate</i>

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200307  
(c) 2003 Thomson Derwent  
File 344:Chinese Patents Abs Aug 1985-2002/Dec  
(c) 2003 European Patent Office  
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)  
(c) 2003 JPO & JAPIO  
File 371:French Patents 1961-2002/BOPI 200209  
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	99417	STROKE OR STROKES OR TIA
S2	1509	APOPLEXY OR (CEREBROVASCULAR OR VASCULAR) ( )ACCIDENT? ?
S3	7699	ISCHEMI? ?
S4	821	HYPOTHERMI?
S5	894394	COOL OR COOLS OR COOLED OR COOLING
S6	943003	CATHETER? OR TUBE OR TUBES OR TUBULAR OR TUBING
S7	12386	VEIN? ? OR VENOUS OR VENA OR VENAE
S8	6287	CANNULA?
S9	5	S1:S3 AND S4:S5 AND S7 AND S8
S10	1	S1:S3 AND S4:S5 AND S6 AND S8
S11	6	S9:S10

11/26, TI/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014929683

WPI Acc No: 2002-750392/200281

New triazolo-pyrimidine compounds useful for the treatment of e.g. deep vein thrombosis, stroke, atherosclerosis, reocclusion, cerebrovascular disease, angina, myocardial infarction and ischemic attacks

11/26, TI/2 (Item 2 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014507170

WPI Acc No: 2002-327873/200236

New thiazolindinedione derivatives useful in treatment of diseases imposing oxidative stress e.g. diabetes mellitus have peroxisome proliferator-activated receptor-gamma agonist activities

11/26, TI/3 (Item 3 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014269321

WPI Acc No: 2002-090019/200212

New  
3-fluoro-2-pyridylmethyl-3-(2,2-difluoro-2-(2-pyridyl)ethylamino)-6-chloropyrazin-2-one-1-acetamide compounds are thrombin inhibitors useful for treating or preventing unstable angina, myocardial infarction transient ischemic attacks

11/26, TI/4 (Item 4 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013447105

WPI Acc No: 2000-619048/200059

Vessel perfusion assembly for cooling spinal vasculature during aortic surgery has tubular branches attached to tubular member and cooler acting on lumen of tubular member

11/26, TI/5 (Item 5 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013327288

WPI Acc No: 2000-499227/200044

Composition comprising an enriched population of human liver progenitors, useful for treatment of liver disorders such as cirrhosis, fibrosis, hepatitis, chronic liver failure, and cancer, and for production of a bioartificial liver

11/26, TI/6 (Item 6 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013052340

WPI Acc No: 2000-224195/200019

Intravascular method for passing oxygenated medium through cerebral vasculature, for treatment of diminished cerebral circulation as a result of stroke or due to cardiac arrest, surgery or trauma



?t11/7/6

11/7/6 (Item 6 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

013052340 \*\*Image available\*\*  
WPI Acc No: 2000-224195/200019

**Intravascular method for passing oxygenated medium through cerebral vasculature, for treatment of diminished cerebral circulation as a result of stroke or due to cardiac arrest, surgery or trauma**

Patent Assignee: COAXIA INC (COAX-N)  
Inventor: BARBUT D R; PATTERSON R H  
Number of Countries: 082 Number of Patents: 003  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200009200	A1	20000224	WO 99US4345	A	19990226	200019 B
AU 9928820	A	20000306	AU 9928820	A	19990226	200030
EP 1027097	A1	20000816	EP 99909663	A	19990226	200040
			WO 99US4345	A	19990226	

Priority Applications (No Type Date): US 99256965 A 19990224; US 9896218 P 19980812

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200009200	A1	E	57	A61M-037/00	
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

AU 9928820	A		A61M-037/00	Based on patent WO 200009200
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EP 1027097	A1	E	A61M-037/00	Based on patent WO 200009200
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Abstract (Basic): WO 200009200 A1

NOVELTY - A **vein** (V) and an artery (A) are accessed at locations which drain and feed at least some of the cerebral vasculature. The medium is passed from the arterial access location through the cerebral vasculature to the **venous** access location.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a system for recirculating and oxygenating blood in the cerebral vasculature of a patient. It includes a **venous cannula** (20) with a distal occlusion balloon (22), an arterial **cannula** (10) with a distal occlusion balloon (12), a pump which circulates blood from the **venous** to the arterial **cannula**, and an oxygenator which oxygenates blood circulated by the pump. The **vein** which is accessed is generally the internal jugular which may be accessed at a location on the neck, through an incision in the femoral **vein**, or through an incision in the subclavian **vein**. The artery accessed is the common carotid which may be accessed at a location in the neck, through an incision in the femoral artery or through an incision in the subclavian artery. The oxygenation rate is initially low to inhibit reperfusion injury. The flow rate is gradually increased. The occlusion balloons are used to prevent flow past the access location in a direction away from the cerebral vasculature. The oxygenated medium may be blood, especially autologous blood, or a synthetic oxygen carrier. It is **cooled** during recirculation to a temperature of 7 to 35degreesC. A therapeutic agent, e.g. NMDA receptor inhibitors, calcium-channel blockers, anticoagulants, glutamate inhibitors or vasodilators, may be incorporated in the flow of oxygenating medium.

USE - The method may be used for protracted perfusing and optionally **cooling** the cerebral vasculature of a patient with oxygenated blood or other media to treat cerebral **ischemia**. This may be caused by a **stroke**, subarachnoid hemorrhage spasms, iatrogenic

vasospasm, or systemic circulatory failure caused by cardiac arrest, shock, circulatory arrest and septicemia.

ADVANTAGE - The method may be used to provide selective isolated cerebral perfusion, and also reduces the dosage of vasoconstrictors required to achieve a desired perfusion pressure.

DESCRIPTION OF DRAWING(S) - The figure shows the use of a pair of access **cannulas** for perfusing the oxygenating medium through the cerebral vasculature.

arterial **cannula** (10)

occlusion balloon (12)

**venous cannula** (20)

occlusion balloon (22)

artery (A)

**vein** (V)

pp; 57 DwgNo 2B/11

Derwent Class: B07; P34

International Patent Class (Main): A61M-037/00

File 348:EUROPEAN PATENTS 1978-2003/Jan W04

(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030130,UT=20030123

(c) 2003 WIPO/Univentio

Set	Items	Description
S1	60683	STROKE OR STROKES OR TIA
S2	1055	APOPLEXY OR (CEREBROVASCULAR OR VASCULAR) ( )ACCIDENT? ?
S3	14360	ISCHEMI? ?
S4	1433	HYPOTHERMI?
S5	271739	COOL OR COOLS OR COOLED OR COOLING
S6	343306	CATHETER? OR TUBE OR TUBES OR TUBULAR OR TUBING
S7	33742	VEIN? ? OR VENOUS OR VENA OR VENAE
S8	14554	CANNULA?
S9	68657	S1:S3
S10	272414	S4:S5
S11	347431	S6 OR S8
S12	48	S9(S)S10(S)S11(S)S7
S13	9412	S9/TI,AB,DE
S14	12	S12. AND ,S13

14/6/1 (Item 1 from file: 348)  
00532729

4-((2-Benzothiazolyl)methylamino)-alpha-((3,4-difluorophenoxy)methyl)-1-piperidineethanol.  
4-((2-Benzothiazolyl)methylamino)-alpha-((3,4-difluorophenoxy)methyl)-1-piperidineethanol.  
4-((2-Benzothiazolyl)methylamino)-alpha-((3,4-difluorophenoxy)methyl)-1-piperidineethanol.

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	597
SPEC A	(English)	EPABF1	5158
Total word count - document A			5755
Total word count - document B			0
Total word count - documents A + B			5755

14/6/2 (Item 2 from file: 348)  
00313253

Method of using superoxide dismutase during surgical procedures.  
Verwendung von Superoxiddismutase bei chirurgischen Prozessen.  
Methode d'utilisation de la superoxyde dismutase pendant des procedures chirurgicales.

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	457
SPEC A	(English)	EPABF1	3613
Total word count - document A			4070
Total word count - document B			0
Total word count - documents A + B			4070

14/6/3 (Item 1 from file: 349)  
00934805 \*\*Image available\*\*

INHIBITION OF PLATELET ACTIVATION, AGGREGATION AND/OR ADHESION BY HYPOTHERMIA  
INHIBITION DE L'ACTIVATION, DE L'AGREGATION ET/OU DE L'ADHESION PLAQUETTAIRE PAR HYPOTHERMIE

Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims

Fulltext Word Count: 11726  
Publication Year: 2002

14/6/4 (Item 2 from file: 349)  
00909384

FLUSH PRESERVATION SOLUTION  
SOLUTION DE PRESERVATION PAR PURGE

Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims

Fulltext Word Count: 11760  
Publication Year: 2002

14/6/5 (Item 3 from file: 349)  
00860672 \*\*Image available\*\*

METHOD AND APPARATUS FOR CEREBRAL TEMPERING  
METHODE ET APPAREIL DE REGULATION DE LA TEMPERATURE CEREBRALE  
Publication Language: English

Filing Language: Swedish  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 3833  
Publication Year: 2001

14/6/6 (Item 4 from file: 349)  
00810502 \*\*Image available\*\*  
METHOD FOR REDUCING MYOCARDIAL INFARCT BY APPLICATION OF INTRAVASCULAR  
HYPOTHERMIA  
TECHNIQUE PERMETTANT DE LIMITER UN INFARCTUS DU MYOCARDE PAR APPLICATION  
D'UNE HYPOTHERMIE INTRAVASCULAIRE  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 12039  
Publication Year: 2001

14/6/7 (Item 5 from file: 349)  
00808543 \*\*Image available\*\*  
METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA  
PROCEDE ET SYSTEME DE TRAITEMENT D'ACCIDENT VASCULAIRE CEREBRALE EN  
UTILISANT L'HYPOTHERMIE  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 5477  
Publication Year: 2001

14/6/8 (Item 6 from file: 349)  
00578389 \*\*Image available\*\*  
A MEDICAL DEVICE FOR REMOVING THROMBOEMBOLIC MATERIAL FROM CEREBRAL  
ARTERIES AND METHODS OF USE  
DISPOSITIF MEDICAL PERMETTANT D'EXTRAIRE UN MATERIAU THROMBO-EMBOLIQUE  
D'ARTERES CEREBRALES; METHODE D'UTILISATION  
Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 7046  
Publication Year: 2000

14/6/9 (Item 7 from file: 349)  
00572119  
VITRONECTIN RECEPTOR ANTAGONIST PHARMACEUTICALS  
MEDICAMENTS ANTAGONISTES DU RECEPTEUR DE LA VITRONECTINE  
Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 70048  
Publication Year: 2000

14/6/10 (Item 8 from file: 349)  
00495307  
COMBINATION OF AN ALDOSE REDUCTASE INHIBITOR AND A GLYCOGEN PHOSPHORYLASE  
INHIBITOR

**COMBINAISON D'UN INHIBITEUR DE REDUCTASE D'ALDOSE ET D'UN INHIBITEUR DE  
PHOSPHORYLASE DE GLYCOGENE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 34830

Publication Year: 1999

14/6/11 (Item 9 from file: 349)

00356870 \*\*Image available\*\*

**SUBSTITUTED N-(INDOLE-2-CARBONYL)-GLYCINAMIDES AND DERIVATIVES AS GLYCOGEN  
PHOSPHORYLASE INHIBITORS**

**(INDOLE-2-CARBONYL)-GLYCINAMIDES SUBSTITUES EN N ET LEURS DERIVES, SERVANT  
D'INHIBITEURS DE LA GLYCOGENE PHOSPHORYLASE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 54267

Publication Year: 1996

14/6/12 (Item 10 from file: 349)

00234568

**METHODS FOR THE TREATMENT OF NEURONAL DAMAGE ASSOCIATED WITH ISCHEMIA ,  
HYPOXIA OR NEURODEGENERATION**

**TRAITEMENTS DE LESIONS NEURONALES LIEES A L' ISCHEMIE , A L'HYPOXIE OU A LA  
DEGENERESCENCE NEURONALE**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 10989

Publication Year: 1993

?t14/3,k/5,7,12

14/3,K/5 (Item 3 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00860672 \*\*Image available\*\*

**METHOD AND APPARATUS FOR CEREBRAL TEMPERING**

**METHODE ET APPAREIL DE REGULATION DE LA TEMPERATURE CEREBRALE**

Patent Applicant/Assignee:

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, SE (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

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(Nationality), (Designated only for: US)

LUNDERQUIST Anders, Svenska vagen 48, S-226 39 Lund, SE, SE (Residence),  
SE (Nationality), (Designated only for: US)

Legal Representative:

BERGMAN Kerstin (et al) (agent), Albihs Malmo AB, P.O. Box 4289, S-203  
14 Malmo, SE,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200193922 A1 20011213 (WO 0193922)

Application: WO 2001SE1259 20010605 (PCT/WO SE0101259)

Priority Application: SE 20002100 20000605

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ

DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ

LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG

SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

Fulltext Availability:  
Claims

#### English Abstract

...low temperature in the selected brain hemisphere. When used in conjunction with the treatment of **stroke**, the present invention comprises cooling the **stroke**-affected brain hemisphere during the time necessary to make a diagnosis and provide medication, and...

#### Claim

It may be noted that a selected brain hemisphere is **cooled** primarily in relation to the choice of artery into which the **cooled** blood is introduced, but a secondary **cooling** of the entire brain also takes place, as a result of the blood flow between the hemispheres. System and method for the treatment of **stroke**  
Figs. 1, 2 and 3 illustrate an embodiment of the system and the method according...

...different order. A first embodiment comprises the steps of  
I . Percutaneous insertion of a first **catheter** into the **vena** femoralis

A device for the extraction of **venous** blood, preferably in the form of an introducer or a first **catheter**, is inserted percutaneously into for example the patient's **vena** femoralis, to extract **venous** blood from the patient. Some other **vein** may be used to extract **venous** blood, but the **vena** femoralis is suitable because it is fairly large and is easily reached for percutaneous attachment of a blood extraction conduit. This first **catheter** preferably has an outer diameter smaller than the normal inner diameter of the **vena** femoralis, so as not to stop entirely the flow of **venous** blood around the introducer, but large enough to give a sufficient flow of extracted blood...

...a lateral opening provided for this purpose in the extra-corporeal part of the arterial **catheter**. Such substances might for example be contrast medium for the fluoroscopic observation of the flow...

...intra-cerebral arteries, for example drugs like heparin and fibrinolytic substances. 3 . Attachment of the **venous catheter** and the arterial **catheter** to an extra-corporeal blood conduit

The inlet of a blood conduit such as a blood **tube** is attached according to prior art to the other opening of the **venous catheter**, and the **tube** is passed through a perfusion pump. The blood **tube** preferably consists of an internally heparinized biocompatible plastic material, and has a diameter suited to its purpose. The blood **tube** passes through a circulation pump according to prior art, a so called perfusion pump, preferably equipped with rollers exerting a peristaltic effect externally on the **tube**. The blood **tube** extends from the pump to a heat exchanger, which in this particular embodiment is arranged for **cooling** the blood, but which in another embodiment may be arranged for heating it. In one type of heat exchanger the blood **tube** passes through a device which supplies or removes heat energy from the blood through the walls of the blood **tube**. In another type of heat exchanger, the blood **tube** is attached to a heparinized heat-exchanging bag with blood canals, providing a large surface area for heating/ **cooling**. In the embodiment intended for the treatment of **stroke**, the heat exchanger should be capable of **cooling** blood to a temperature between 0 and 37°C. In some cases, a small temperature fall of only a few degrees is desirable, for example a **cooling** to 34°C, whereas in other cases a larger temperature fall is desirable, such as...

...such as from 37°C to 40- 42°C. As the selected brain hemisphere is

cooled /heated, the general body temperature also falls/rises, and accordingly the temperature of the **venous** blood extracted. The heat exchanger therefore must be controlled so as to keep the blood returned to the body after 3 0 **cooling** /heating at the desired temperature. Optionally, the blood conduit may be attached to an oxygenator...

...extra-corporeal blood circuit is attached to the proximal end 3 5 of the arterial **catheter** reaching into the arteria carotis communis, from the heat exchanger or in relevant cases from...

...has been assumed to be placed in the proximity of the place of extraction of **venous** blood, but it can also be placed elsewhere in the extra-corporeal blood circuit, for example immediately before the blood return **catheter**. In such a case, the rest of the blood conduit should be primed before start...

...an open reservoir containing, for example, 5 priming solution or blood, is arranged between the **venous catheter** and the circulation pump, and a shunt, in the form of an internally heparinized blood **tube**, has been arranged extra-corporeally to create a connection from one section between the **venous catheter** and the reservoir to another section between the arterial **catheter** and the heat exchanger/oxygenator. By closing the flow of blood to/from the **vein** and opening the now I 0 from the artery, blood will flow out of the arterial **catheter**, and will be pumped by the circulation pump to the reservoir, whereby the system will be purged of any air present. Any air present on the **venous** side can then be removed similarly by stopping the flow of blood to/from the artery and using the circulation pump to make the **venous** blood flow to the reservoir. )When the system has been purged of ...description below, can be started. A kit containing disposable articles comprises one or several blood **tubes** according to the specifications above, configured to be attached to the inlet and the outlet...

14/3,K/7 (Item 5 from file: 349)

*a duplicate*

DIALOG(R) File 349:PCT FULLTEXT

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00808543 \*\*Image available\*\*

**METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA**

**PROCEDE ET SYSTEME DE TRAITEMENT D'ACCIDENT VASCULAIRE CEREBRALE EN UTILISANT L'HYPOTHERMIE**

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200141708 A2-A3 20010614 (WO 0141708)

Application: WO 2000US42676 20001207 (PCT/WO US0042676)

Priority Application: US 99456110 19991207

Parent Application/Grant:

Related by Continuation to: US 99456110 19991207 (CON)

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ

DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ

LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG

SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR



(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English  
Filing Language: English  
Fulltext Word Count: 5477

#### METHOD AND SYSTEM FOR TREATING STROKE USING HYPOTHERMIA

Fulltext Availability:  
Detailed Description

#### English Abstract

A method for treating **stroke** patients includes inducing mild or moderate **hypothermia** in a patient using one or more closed loop heat exchange **catheters** positioned either in the patient's central **venous** system, carotid artery or both when the patient's body temperature and/or brain temperature are above predetermined thresholds. Additional steps for treating and managing a **stroke** patient can also be undertaken, e.g., infusing paralytics, infusing neuro-protectants, infusing anti-clot and/or clot lysis medications, performing neuro-protection procedures, performing non-**catheter**-based **hypothermia**, performing angioplasty, deploying stent, removing clot(s), maintaining a predetermined ICP level such as draining...

#### Detailed Description

... by the present assignee and incorporated herein by reference, the above-mentioned advantages in treating **stroke** patients by internal **cooling** can also be realized by **cooling** the patient's entire body, i.e., by systemic, internally-induced **hypothermia**. The advantage of systemic **hypothermia** is that, as recognized by the present assignee, to induce systemic **hypothermia** a **cooling catheter** or other **cooling** device need not be advanced into the blood

2

supply of the brain, but rather can be easily and quickly placed into the large **vena cava** of the central **venous** system. Moreover, since many patients already are intubated with central **venous catheters** for other clinically approved purposes, providing a central **venous catheter** that can also **cool** the blood requires no additional surgical procedures for those patients. A **cooling central venous catheter** is disclosed in the present assignee's co-pending U.

S. Pat. Applications Serial Nos...

...reference.

#### Summary of the Invention

The present invention relates to methods and systems for treating **stroke** patients who can benefit from **hypothermia** treatment. In one embodiment, the method for treating a **stroke** condition includes identifying that the patient has had a **stroke**, and in response, lowering the patient's temperature using at least one heat exchange **catheter** placed in the central **venous** system of the patient. In another embodiment, a heat exchange **catheter** is placed through the carotid artery of the patient to lower the temperature of the...

...s brain. In yet another embodiment, the patient may receive at least two heat exchange **catheters**, one placed in the central **venous** system, and another placed through the carotid artery to lower the body temperature with directed focus on the brain. In this embodiment, the heat exchange rates of each heat exchange **catheter** may be adjusted separately depending on the patient's relative body and brain temperatures.

In...Referring to Figure 2, a second therapeutic system 11 is shown for treating a **stroke** patient 12. In addition or in lieu of the first **catheter** 18, a second **cooling catheter** 28 which is configured for use as a central **venous catheter** can be advanced into the central **venous** system of the patient 12 through a neck entry point 29. The

second **catheter** 28 can be embodied by the **catheter** disclosed in the above-referenced patient application Serial Nos. 09/253,109 and 09/305,613. Accordingly, the second **catheter** 28 can communicate with the **cooling** system 14 via coolant supply and return lines 30, 32. Also, the second **catheter** 28 can communicate with one or more central **venous** components 34, such as IV infusion devices, drug delivery syringes, blood withdrawal devices, etc. Other central **venous** components will be understood by those skilled in the art. The component 34 can also... includes identifying a stroke patient who can benefit from hypothermia treatment 5 1.

Once the **stroke** patient 12 is identified, at least one heat exchange **catheter** 18, 28 is advanced into the patient 12 as shown in block 6 1. In one embodiment, the heat exchange **catheter** 18,28 is advanced into the central **venous** system of the patient 12. Once the heat exchange **catheter** 18,28 is advanced into the patient 12, **hypothermia** is induced via the coolant circulation in the heat exchange region 24, 36 of the **catheter** 18, 28. In another embodiment, the heat exchange **catheter** 18, 28 is placed through the carotid artery of the patient to lower the temperature...

...selectively. In yet another embodiment, the patient 12 may receive at least two heat exchange **catheters**, one placed in the central **venous** system, and another placed through the carotid artery to lower the body temperature with directed...

...on the brain. In this

9

embodiment, the heat exchange rates of each heat exchange **catheter** may be adjusted separately depending on the patient's relative body and brain temperatures and...Once a target temperature of about 32'C-36'C has been reached, the first **catheter** 18 can be removed and the second **catheter** 28 advanced into the **vena** cava through a neck entry point 29 to maintain the target temperature. It is to **hypothermia** in a **stroke** patient:, other sequences can be used. For example, the first **catheter** 18 can be used exclusively to the second **catheter** 28; the second **catheter** 28 can be used exclusively to the first **catheter** 18; or both the first and second **catheters** 18, 28 can be used together simultaneously. Additionally, the caregiver may decide to advance the first **catheter** 18 into the carotid artery of the patient to **cool** or maintain the brain temperature.

In the embodiment where ICP is monitored and maintained, the...

14/3,K/12 (Item 10 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00234568

METHODS FOR THE TREATMENT OF NEURONAL DAMAGE ASSOCIATED WITH ISCHEMIA ,  
HYPOXIA OR NEURODEGENERATION  
TRAITEMENTS DE LESIONS NEURONALES LIEES A L' ISCHEMIE , A L'HYPOXIE OU A LA  
DEGENERESCENCE NEURONALE

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9308828 A1 19930513

Application: WO 92US9618 19921106 (PCT/WO US9209618)

Priority Application: US 91734 19911108

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MG MN MW NL NO PL RO RU SD SE US AT BE CH DE DK ES FR GB GR IE IT LU MC

NL SE BF BJ CF CG CI CM GA GN ML MR SN TD TG

Publication Language: English

Fulltext Word Count: 10989

**METHODS FOR THE TREATMENT OF NEURONAL DAMAGE ASSOCIATED WITH ISCHEMIA ,  
HYPOXIA OR NEURODEGENERATION  
TRAITEMENTS DE LESIONS NEURONALES LIEES A L' ISCHEMIE , A L'HYPOXIE OU A LA  
DEGENERESCENCE NEURONALE**

Fulltext Availability:

Detailed Description

English Abstract

...system of individuals in need of such treatment are disclosed. The neuronal damage associated with **ischemia** , hypoxia, or neurodegeneration may result from **stroke** or cardiac arrest. This invention provides for the intravenous administration of neurotrophic factors such as...

French Abstract

...des lesions neuronales situees dans le systeme nerveux central. Ces lesions neuronales liees a l' **ischemie** , a l'hypoxie ou a la degenerescence neuronale peuvent provenir de crises ou d'arrets...

Detailed Description

... heparin; Biosynth

International, Skokie, IL) had no biological activity in this assay,

Three days after **cannula** implantation, animals were reanesthetized with 2% halothane and given atropine (0.15 mg/kg, i...

...Ardmore, PA) delivering 1% halothane/70% nitrous oxide in oxygen. The right femoral artery and **vein** were **cannulated** for monitoring of mean arterial blood pressure (MABP; Gould RS3200 Blood Pressure Monitor, Gould Inc...

...hematocrit were measured at least twice during surgery and the immediate post operative period, The **stroke** volume and rate of the ventilator was adjusted to maintain PaO<sub>2</sub> between 100-200 mm...

...36-37,50C with a homeothermic blanket control unit (Harvard Bioscience, South Natick, MA), Focal **ischemic** infarcts were made in the right lateral cerebral cortex in the territory of the middle cerebral artery (MCA) by the method of Chen, et al, **Stroke** , 17:738@743, 1986, Both common carotid arteries were exposed by midline ventral incision. The...

...was made at the junction of the zygoma and squamosal bone using a dental drill

cooled with saline. Using a dissecting microscope, the dura was opened with fine forceps, and the...

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200307  
(c) 2003 Thomson Derwent  
File 344:Chinese Patents Abs Aug 1985-2002/Dec  
(c) 2003 European Patent Office  
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)  
(c) 2003 JPO & JAPIO  
File 371:French Patents 1961-2002/BOPI 200209  
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	99417	STROKE OR STROKES OR TIA
S2	1509	APOPLEXY OR (CEREBROVASCULAR OR VASCULAR) ()ACCIDENT? ?
S3	7699	ISCHEMI? ?
S4	821	HYPOTHERMI?
S5	894394	COOL OR COOLS OR COOLED OR COOLING
S6	943003	CATHETER? OR TUBE OR TUBES OR TUBULAR OR TUBING
S7	12386	VEIN? ? OR VENOUS OR VENA OR VENAE
S8	6287	CANNULA?
S9	30	S1:S3 AND S4:S5 AND S7 AND S6
S10	30	S9 NOT S8

10/26, TI/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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014958742

WPI Acc No: 2003-019256/200301

New 1,4,5,6-tetrahydropyrazolo-(3,4-c)-pyridin-7-one derivatives are factor Xa inhibitors, useful for treating thromboembolic disorders e.g. stroke, atherosclerosis, deep vein thrombosis, thrombophlebitis, arterial embolism

10/26, TI/2 (Item 2 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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014939085

WPI Acc No: 2002-759794/200282

New aminomethyl-pyrroloquinazoline compounds are thrombin receptor antagonists useful in the treatment of e.g. osteoporosis

10/26, TI/3 (Item 3 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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014912042

WPI Acc No: 2002-732748/200279

Inhibition of platelet in a human or animal for treating acute coronary syndromes involves placing an intravascular heat exchange apparatus in the vasculature to cool the patient's body temperature

10/26, TI/4 (Item 4 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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014870881

WPI Acc No: 2002-691587/200274

New substituted carboxamides useful as antithrombotic agents

10/26, TI/5 (Item 5 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

014727624

WPI Acc No: 2002-548328/200258

Therapeutic cooling for patient, uses central venous catheter with heat-exchange properties controlled by e.g. inflatable balloon, including also Foley catheter improvement for cooling urinary tract

10/26, TI/6 (Item 6 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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014541759

WPI Acc No: 2002-362462/200239

Kit of parts for intensive care unit patients, comprises central venous line catheter with elongate structure, anchor and element for heat exchange with central venous system, and instructions for use of catheter

10/26, TI/7 (Item 7 from file: 350)  
DIALOG(R) File 350: Derwent WPIX

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014541751

WPI Acc No: 2002-362454/200239

Utilizing central venous line catheter by flushing first chemical through first lumen, removing guide wire from second lumen, and flushing second chemical through the second lumen

10/26, TI/8 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014541750

WPI Acc No: 2002-362453/200239

. Venous line catheter system for access to the central venous blood supply of patient comprises pump feeding heating/ cooling agent at specified flow rate through heat exchange element

10/26, TI/9 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014420916

WPI Acc No: 2002-241619/200229

New substituted heterocyclic amides are factor Xa inhibitors, useful as antithrombotic agents for treating, e.g. thrombosis, myocardial infarction and atherosclerotic disorders

10/26, TI/10 (Item 10 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014406367

WPI Acc No: 2002-227070/200228

New 2-(3-ethylamino-2-oxo-1,2-dihydropyrazin-1-yl)-N-ethyl acetamide derivatives useful as thrombin inhibitors and associated thrombotic occlusions

10/26, TI/11 (Item 11 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014326958

WPI Acc No: 2002-147661/200219

Amino substituted bicyclic compound useful for treating atherosclerosis, are obtained by coupling amino substituted 2-chromanyl derivative with benzoyl derivative via an amide bond

10/26, TI/12 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014268879

WPI Acc No: 2002-089577/200212

Improved hypothermia medical procedure for cooling body of patient to below 35 degrees C using heat transfer device during beating heart procedures

10/26, TI/13 (Item 13 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014196844

WPI Acc No: 2002-017541/200202

**Coronary bypass procedure useful to induce hypothermia in connection with a medical procedure involves the use of a heat transfer element in a blood vessel of a patient**

10/26, TI/14 (Item 14 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014196437

WPI Acc No: 2002-017134/200202

**New alpha-sulfonamido and alpha-sulfinamido containing carboxylic acid compounds are integrin antagonists, useful for preventing or treating thrombotic disorders e.g. acute coronary syndrome, myocardial infarction and unstable angina**

10/26, TI/15 (Item 15 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014141081

WPI Acc No: 2001-625292/200172

**Reducing myocardial infarct by application of intra-vascular hypothermia using a heat exchange catheter inserted into a vein and advanced to the heart**

10/26, TI/16 (Item 16 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014123154

WPI Acc No: 2001-607366/200169

**New pyridoxine phosphonate and malonate derivatives, useful for treating hypertension, myocardial ischemia, cardiovascular diseases, diabetes mellitus and related diseases**

10/26, TI/17 (Item 17 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014086271

WPI Acc No: 2001-570485/200164

**Therapeutic hypothermia establishing kit e.g. for treating brain trauma and brain ischemia such as that caused by cardiac arrest by inducing hypothermia in patient**

10/26, TI/18 (Item 18 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013967562

WPI Acc No: 2001-451776/200148

**Kit for treating cardiac arrest in patient, comprises catheter connected to coolant for placing in central venous system and catheter with fluid dispensing component connected to bolus of saline solution for placing in aortic arch**

10/26, TI/19 (Item 19 from file: 350)

DIALOG(R) File 350: Derwent WPIX



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013924194

WPI Acc No: 2001-408407/200143

**Treating stroke patients involves inducing hypothermia using heat exchange catheter**

10/26, TI/20 (Item 20 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013881867

WPI Acc No: 2001-366079/200138

**New peptidyl heterocyclic compounds are selective factor Xa inhibitors useful as anticoagulants for treating thrombotic disorders and inhibiting coagulation in vitro**

10/26, TI/21 (Item 21 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013684541

WPI Acc No: 2001-168765/200117

**System for intravascular cooling of patient's body for use in stroke therapy, comprises flexible cooling element having heat transfer segments connected with flexible joints, attached to catheter**

10/26, TI/22 (Item 22 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013577122

WPI Acc No: 2001-061329/200107

**New organic derivatives as factor Xa inhibitors, useful for treating e.g. myocardial infarction, refractory angina or thrombotic stroke**

10/26, TI/23 (Item 23 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

013547314

WPI Acc No: 2001-031520/200104

**Kit for lowering and maintaining temperature of patient, has catheters of different cooling capacity for placement in patient's circulatory system**

10/26, TI/24 (Item 24 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013540925

WPI Acc No: 2001-025131/200103

**New substituted alkylene derivatives, used to treat and prevent e.g. myocardial infarction, unstable angina, embolic and thrombotic stroke, transient ischemic attacks, venous thrombosis and pulmonary embolus, are inhibitors of factor Xa**

10/26, TI/25 (Item 25 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013540924

WPI Acc No: 2001-025130/200103

New substituted alkylene derivatives, used to treat and prevent e.g. myocardial infarction, unstable angina, embolic and thrombotic stroke, transient ischemic attacks, venous thrombosis and pulmonary embolus, are inhibitors of factor Xa

10/26, TI/26 (Item 26 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013540923

WPI Acc No: 2001-025129/200103

New substituted alkylene derivatives, used to treat and prevent e.g. myocardial infarction, unstable angina, embolic stroke, transient ischemic attacks, venous thrombosis and coagulopathy, are inhibitors of factor Xa

10/26, TI/27 (Item 27 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013327039

WPI Acc No: 2000-498978/200044

Alkanoyl derivatives and their preparation as Factor Xa inhibitors useful for treating e.g. cardiovascular disorders such as restenosis

10/26, TI/28 (Item 28 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013303741

WPI Acc No: 2000-475676/200041

New pyridine-, pyrazine- or pyrimidine-carboxamide derivatives useful as anticoagulants

10/26, TI/29 (Item 29 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013065649

WPI Acc No: 2000-237521/200020

Catheter for inducing hyperthermia or hypothermia comprises an elongate flexible catheter, fluid lumen(s), a heat exchanger and a body-fluid channeling sleeve

10/26, TI/30 (Item 30 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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011750697

WPI Acc No: 1998-167607/199815

Pharmaco-hypothermia antegrade cardioplegia procedure - injecting cardioplegic solution into left ventricle after clamping aorta and pulmonary trunk and massaging heart when asystolia is reached

?

PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES

?ds

Set	Items	Description
S1	99417	STROKE OR STROKES OR TIA
S2	1509	APOPLEXY OR (CEREBROVASCULAR OR VASCULAR) () ACCIDENT? ?

S3 7699 ISCHEMI? ?  
 S4 821 HYPOTHERMI?  
 S5 894394 COOL OR COOLS OR COOLED OR COOLING  
 S6 943003 CATHETER? OR TUBE OR TUBES OR TUBULAR OR TUBING  
 S7 12386 VEIN? ? OR VENOUS OR VENA OR VENAE  
 S8 6287 CANNULA?  
 S9 30 S1:S3 AND S4:S5 AND S7 AND S6  
 S10 30 S9 NOT S8  
 ?t10/7/5,6,8,12,17,18,21,29

10/7/5 (Item 5 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
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014727624 \*\*Image available\*\* *a duplicate*  
 WPI Acc No: 2002-548328/200258

**Therapeutic cooling for patient, uses central venous catheter with heat-exchange properties controlled by e.g. inflatable balloon, including also Foley catheter improvement for cooling urinary tract**

Patent Assignee: ALSIUS CORP (ALSI-N)

Inventor: EVANS S M; LUO X; PECOR R; SHIMADA L M; WALKER B; WORTHERN W J

Number of Countries: 094 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258606	A1	20020801	WO 2001US2431	A	20010124	200258 B

Priority Applications (No Type Date): WO 2001US2431 A 20010124

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258606	A1	E	30	A61F-007/12	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Abstract (Basic): WO 200258606 A1

NOVELTY - The inventive device comprises an introducer sheath for a central **venous catheter** having a sheath body and temperature sensor mounted distally on the body. The **catheter** or sheath contains a heat-exchange region through which coolant is circulated, the coolant temperature being controlled in response to signals from the temperature sensor. The system also includes heat-exchange **catheters** for arterial dialysis and jugular **vein cooling**, and an improved **Foley catheter** for heat-exchange **cooling** via a patient's urinary tract.

USE - For **cooling** a patient's blood temperature, and hence ameliorating possible fever 'spikes'.

ADVANTAGE - Improves healing for patients suffering from severe brain trauma or **ischemia** resulting from **stroke** /heart attack, such protective short-term **hypothermia** being particularly applicable for patients undergoing minimally invasive heart/aneurysm surgery, the inventive system applying to patients already intubated with central **venous catheters** for other purposes, thus adding a blood- **cooling catheter** would require no additional surgery to be carried out.

DESCRIPTION OF DRAWING(S) - The drawing illustrates an exploded view in perspective of a first embodiment of the inventive system for **cooling** using a **venous catheter**.

Therapeutic **catheter** system (10)

Coolant supply line, and (14)

Return line (16)

**Catheter** (18)

Sheath, having (42)

Hollow body and (42A)

Side port (43)

Proximal end (44)

Distal end (46)  
Barrier for sealing after **catheter** introduction (48)  
Temperature sensor, connected to (50)  
**Cooling** system via (12)  
Cable, wireless or fibreoptic connection through wall of sheath 12  
(52)

pp; 30 DwgNo 1/9  
Derwent Class: P32; P34  
International Patent Class (Main): A61F-007/12  
International Patent Class (Additional): A61M-025/10

10/7/6 (Item 6 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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014541759 \*\*Image available\*\*  
WPI Acc No: 2002-362462/200239

*2 of  
the authors inventors*

**Kit of parts for intensive care unit patients, comprises central venous line catheter with elongate structure, anchor and element for heat exchange with central venous system, and instructions for use of catheter**

Patent Assignee: ALSIUS CORP (ALSI-N)  
Inventor: ALIBERTO A C; EVANS S M; WORTHEN W J  
Number of Countries: 097 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200226285	A2	20020404	WO 2001US30250	A	20010927	200239 B
AU 200194800	A	20020408	AU 200194800	A	20010927	200252

Priority Applications (No Type Date): US 2000671114 A 20000928

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200226285 A2 E 35 A61M-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200194800 A A61M-000/00 Based on patent WO 200226285

Abstract (Basic): WO 200226285 A2

NOVELTY - A kit of parts comprises central **venous** (CV) line **catheter** (20) and instructions for use of CV line **catheter**. **Catheter** comprises elongate structure(s) configured for establishing CV access, heat exchange element(s), and CV line **catheter** suture anchor(s). Elongate structure has proximal and distal portions. Heat exchange element extends at least along distal portion for effecting heat exchange with CV system.

DETAILED DESCRIPTION - Elongate structure defines at least a first lumen in communication with exterior of structure at proximal and distal portions. CV line **catheter** suture anchor engage with exterior of elongate structure and includes structure configured to suturably affix elongate structure to patient.

USE - For use in access to central **venous** blood supply of patient, for use in intensive care unit (ICU) patients, particularly in patients who suffered **stroke** or other brain traumatic event, and neuro-ICU patients.

ADVANTAGE - The kit efficiently provides a central **venous catheter** with additional capability of **cooling** or warming a patient, especially patient's blood. Hence, the patient temperature is effectively and precisely managed in a single device. The **catheter** enables access to the **venous** system by a single incision, and effectively reduces the risk of additional complications, with efficient **cooling** or warming of patient body temperature. The heat exchange relationship between the system and the central **venous**

system of the patient can be maintained for prolonged duration such as for 1 hour-29 days. The system effectively operates to maintain patient temperature at a desired level. The specific heat exchange fluid utilized, is biocompatible to avoid harm to the patient in the event of inadvertent rupture. By the multiple balloon design, the **catheter** has the ability of bend and flex when placed in a curved vasculature. The anchor enables the **catheter** to be maintained for prolonged period in the body.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic diagram showing a central **venous** line **catheter** temperature control system.

Central **venous** line **catheter** (20)

pp; 35 DwgNo 1/9

Derwent Class: B07; P34

International Patent Class (Main): A61M-000/00

10/7/8 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014541750 \*\*Image available\*\*

*one of the inventors*

WPI Acc No: 2002-362453/200239

**Venous line catheter system for access to the central venous blood supply of patient comprises pump feeding heating/ cooling agent at specified flow rate through heat exchange element**

Patent Assignee: ALSIUS CORP (ALSI-N)

Inventor: BALDING D P; BARKER P; EVANS S M; WALKER B D

Number of Countries: 095 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200226175	A1	20020404	WO 2001IB585	A	20010409	200239 B
AU 200144461	A	20020408	AU 200144461	A	20010409	200252

Priority Applications (No Type Date): US 2000671114 A 20000928

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200226175 A1 E 35 A61F-007/12

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200144461 A A61F-007/12 Based on patent WO 200226175

Abstract (Basic): WO 200226175 A1

NOVELTY - **Venous** line **catheter** system comprises a **catheter** having elongate structure(s) to establish central **venous** access, heat exchange element(s) extending along the distal portion of the structure, and a pump feeding heating/ **cooling** agent at 150-450 ml/minute through the heat exchange element. A lumen communicates with the exterior or the structure at its distal and proximal portions.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of operating a **venous** line **catheter** system.

USE - The **venous** line **catheter** system is used for access to the central **venous** blood supply of a patient. It is typically used in intensive care unit (ICU) patients, particularly those patients who have suffered a **stroke** or other brain traumatic event.

ADVANTAGE - The inventive **catheter** system has an additional capability of **cooling** a patient, thus effectively and precisely managing patient temperature in a single device. The **cooling** function is performed efficiently in tandem with a procedure, which is known to be likely attended by fever, thus anticipating such fever and facilitating its control. The heat exchange relationship between the system and the central **venous** system of the patient can be maintained for a prolonged duration, e.g. 1 hour to 29 days.

DESCRIPTION OF DRAWING(S) - The figure is a schematic side

elevational view of a central **venous** line **catheter** .

Balloon (24)

pp; 35 DwgNo 2/9

Derwent Class: B07; P32

International Patent Class (Main): A61F-007/12

10/7/12 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014268879 \*\*Image available\*\*

WPI Acc No: 2002-089577/200212

**Improved hypothermia medical procedure for cooling body of patient to below 35 degrees C using heat transfer device during beating heart procedures**

Patent Assignee: INNERCOOL THERAPIES INC (INNE-N); DOBAK J D (DOBA-I)

Inventor: DOBAK J D

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200174276	A1	20011011	WO 2001US6880	A	20010305	200212 B
AU 200141963	A	20011015	AU 200141963	A	20010305	200214
US 20020040717	A1	20020411	US 9812287	A	19980123	200227
			US 9847012	A	19980324	
			US 9852545	A	19980331	
			US 98103342	A	19980623	
			US 99292532	A	19990415	
			US 99306866	A	19990507	
			US 99373112	A	19990811	
			US 2000539932	A	20000331	
			US 20018999	A	20011207	

Priority Applications (No Type Date): US 2000539932 A 20000331; US 9812287 A 19980123; US 9847012 A 19980324; US 9852545 A 19980331; US 98103342 A 19980623; US 99292532 A 19990415; US 99306866 A 19990507; US 99373112 A 19990811; US 20018999 A 20011207

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200174276 A1 E 28 A61F-007/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200141963 A A61F-007/00 Based on patent WO 200174276

US 20020040717 A1 A61F-007/00 CIP of application US 9812287

CIP of application US 9847012

CIP of application US 9852545

CIP of application US 98103342

CIP of application US 99292532

CIP of application US 99306866

CIP of application US 99373112

Div ex application US 2000539932

Abstract (Basic): WO.200174276 A1

NOVELTY - A working fluid supply (1) supplies a chilled aqueous solution via a **catheter** (12) and a heat transfer element (14) serving as the **cooling** tip of the flexible **catheter** , which is long enough to be passed through the vascular system and placed in the inferior **vena** cava. The body is **cooled** to less than 35 degrees C. to induce a bradycardia of the heart to facilitate surgery during a beating heart procedure.

DETAILED DESCRIPTION - AN INDEPENDENT CLAIM is included for a coronary bypass procedure.

USE - Inducing **hypothermia** during a medical heart procedure.

Derwent Class: P31; P32  
International Patent Class (Main): A61B-019/00; A61F-007/00

10/7/18 (Item 18 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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013967562

WPI Acc No: 2001-451776/200148

*2 of the inventors*

**Kit for treating cardiac arrest in patient, comprises catheter connected to coolant for placing in central venous system and catheter with fluid dispensing component connected to bolus of saline solution for placing in aortic arch**

Patent Assignee: ALSIUS CORP (ALSI-N); BALDING D (BALD-I); EVANS S M (EVAN-I); LASERSOHN J W (LASE-I); WINTER S C (WINT-I); WORTHEN W J (WORT-I)

Inventor: BALDING D; EVANS S M; LASERSOHN J W; WINTER S C; WORTHEN W J; BALDING D P

Number of Countries: 088 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200149236	A2	20010712	WO 2001US58	A	20010103	200148 B
AU 200127542	A	20010716	AU 200127542	A	20010103	200169
US 20010047191	A1	20011129	US 99253109	A	19990219	200202
			US 99266452	A	19990311	
			US 99375079	A	19990816	
			US 2000477490	A	20000104	
			US 2001911370	A	20010724	
US 20010047192	A1	20011129	US 99253109	A	19990219	200202
			US 99266452	A	19990311	
			US 99375079	A	19990816	
			US 2000477490	A	20000104	
			US 2001911371	A	20010724	
US 20010049545	A1	20011206	US 99253109	A	19990219	200203
			US 99266452	A	19990311	
			US 99375079	A	19990816	
			US 2000477490	A	20000104	
			US 2001911369	A	20010724	
US 6393320	B1	20020521	US 99253109	A	19990219	200239
			US 99266452	A	19990311	
			US 99375079	A	19990816	
			US 2000477490	A	20000104	
			US 2001911371	A	20010724	
US 6405080	B1	20020611	US 99266452	A	19990311	200244
			US 99375079	A	19990816	
			US 2000477490	A	20000104	

Priority Applications (No Type Date): US 2000477490 A 20000104; US 99253109 A 19990219; US 99266452 A 19990311; US 99375079 A 19990816; US 2001911370 A 20010724; US 2001911371 A 20010724; US 2001911369 A 20010724

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200149236 A2 E 28 A61H-000/00

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200127542 A A61H-000/00 Based on patent WO 200149236

US 20010047191 A1 A61N-001/39 CIP of application US 99253109

CIP of application US 99266452

CIP of application US 99375079

Div ex application US 2000477490

CIP of patent US 6149670

US 20010047192 A1 A61M-025/00 CIP of application US 99253109

			CIP of application US 99266452
			CIP of application US 99375079
			Div ex application US 2000477490
			CIP of patent US 6149670
US 20010049545	A1	A61F-007/00	CIP of application US 99253109
			CIP of application US 99266452
			CIP of application US 99375079
			Div ex application US 2000477490
			CIP of patent US 6149670
US 6393320	B1	A61N-001/39	CIP of application US 99253109
			CIP of application US 99266452
			CIP of application US 99375079
			Div ex application US 2000477490
			CIP of patent US 6149670
US 6405080	B1	A61N-001/39	CIP of application US 99266452
			CIP of application US 99375079

Abstract (Basic): WO 200149236 A2

NOVELTY - The kit comprises a first **catheter** having fluid circulation passageway(s), which can be placed in a patient's central **venous** system and is connected to a coolant source, and a second **catheter** configured for at least partial placement in patient's aortic arch. The second **catheter** comprises a fluid dispensing component connectable to a bolus of saline solution.

DETAILED DESCRIPTION - The kit further comprises component(s) containing drugs such as epinephrine, buffers, antiarrhythmics and/or atropine.

INDEPENDENT CLAIMS are also included for the following:

- (1) treating cardiac arrest in a patient;
- (2) system for treating cardiac arrest in a patient

USE - For treating cardiac arrest in a patient.

ADVANTAGE - The system enables to reduce **ischemia** due to **stroke** or heart attack by **cooling** the patient below normal body temperature. The method improves the mortality rate of the patient and the neurological outcome of the patient. The **cooling** of patient is controllable, the kit is relatively easy to use and blood temperature can be maintained at a desired set point. The brain temperature can be reduced easily and quickly by the system, thereby reducing trauma.

pp; 28 DwgNo 0/5

Derwent Class: B07; P32; P33; P34

International Patent Class (Main): A61F-007/00; A61H-000/00; A61M-025/00; A61N-001/39

10/7/21 (Item 21 from file: 350)  
 DIALOG(R) File 350:Derwent WPIX  
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013684541 \*\*Image available\*\*  
 WPI Acc No: 2001-168765/200117

**System for intravascular cooling of patient's body for use in stroke therapy, comprises flexible cooling element having heat transfer segments connected with flexible joints, attached to catheter**

Patent Assignee: INNERCOOL THERAPIES INC (INNE-N)

Inventor: DOBAK J D

Number of Countries: 029 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200110365	A1	20010215	WO 2000US20622	A	20000728	200117 B
AU 200067496	A	20010305	AU 200067496	A	20000728	200130
EP 1119321	A1	20010801	EP 2000955269	A	20000728	200144
			WO 2000US20622	A	20000728	
US 20010041923	A1	20011115	US 99373112	A	19990811	200172
			US 2001907782	A	20010718	
US 20020151946	A1	20021017	US 9812287	A	19980123	200270
			US 9847012	A	19980324	
			US 9852545	A	19980331	

non-final 6,051,019  
 artery  
 5,957,963  
 6,231,595  
 selective cooling of brain



US 98103342 A 19980623 - 6096, 068 } selective  
 US 99292532 A 19990415 - Final } cooling  
 US 99373112 A 19990811 - NON-Final } device  
 US 2002160611 A 20020530  
 US 9812287 A 19980123 200303  
 US 9847012 A 19980324  
 US 9852545 A 19980331  
 US 98103342 A 19980623  
 US 99292532 A 19990415  
 US 99373112 A 19990811  
 US 2001907782 A 20010717  
 US 2002219735 A 20020815

US 20020193855 A1 20021219  
 pubs  
 venous  
 cooling  
 for stroke  
 8/15/02

Priority Applications (No Type Date): US 99373112 A 19990811; US 2001907782  
 A 20010718; US 9812287 A 19980123; US 9847012 A 19980324; US 9852545 A  
 19980331; US 98103342 A 19980623; US 99292532 A 19990415; US 2002160611 A  
 20020530; US 2002219735 A 20020815

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200110365 A1 E 42 A61F-007/00

Designated States (National): AU CA JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
 MC NL PT SE

AU 200067496 A A61F-007/00 Based on patent WO 200110365

EP 1119321 A1 E A61F-007/00 Based on patent WO 200110365

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI

US 20010041923 A1 A61F-007/00 Div ex application US 99373112

US 20020151946 A1 A61F-007/00 CIP of application US 9812287

CIP of application US 9847012

CIP of application US 9852545

CIP of application US 98103342

CIP of application US 99292532

Cont of application US 99373112

CIP of patent US 5957963

CIP of patent US 6051019

CIP of patent US 6096068

CIP of patent US 6231595

US 20020193855 A1 A61F-007/00 CIP of application US 9812287

CIP of application US 9847012

CIP of application US 9852545

CIP of application US 98103342

CIP of application US 99292532

Div ex application US 99373112

Div ex application US 2001907782

CIP of patent US 5957963

CIP of patent US 6051019

CIP of patent US 6096068

CIP of patent US 6231595

Abstract (Basic): WO 200110365 A1

NOVELTY - The system for intravascular cooling of a patient's  
 body comprises a flexible catheter insertable into vena cavae, a  
 flexible cooling element (14) having heat transfer segments  
 (20,22,24) connected with flexible joints and attached to the distal  
 end of catheter, and a heating blanket for heating selected portions  
 of patient's body.

DETAILED DESCRIPTION - Each heat transfer segment comprises a  
 number of interior surface irregularities like helical ridges  
 (28,32,36) and grooves (26,30,34) which are shaped and arranged to mix  
 the surrounding fluids. The flexible joints in the cooling element  
 includes bellows (25,27) or a flexible tube. The helical ridges and  
 grooves are twisted opposing the twist of the adjacent heat transfer  
 segment. The heating blanket, preferably an electric heater employs a  
 warm air blower and has air channels for evenly distributing air to  
 selective areas. An INDEPENDENT CLAIM is also included for a method for  
 intravascular cooling of a patient's body.

USE - For reducing platelet aggregation in blood vessels, reducing dependence on drug therapies in treating neurological insults or injuries resulting in **ischemia**, reducing cell damage during or after myocardial infarction, reducing stenoses recurrence following angioplasty and reducing reperfusion injury following reflow.

ADVANTAGE - The device effectively induces artificial state of **hypothermia** and indirectly **cools** the organs such as heart and brain which have high blood flow. The warming blanket or device applied on various parts of the body provides comfort to the patient and also inhibits thermoregulatory responses such as vasoconstriction. The disposable and flexible conductive heat transfer element effectively absorbs high amount of heat. The **cooling** system is administered safely and easily. The **hypothermic** therapy provides benefit to numerous cardiac and neural settings, for e.g. minimizing **ischemic** and stenoses.

DESCRIPTION OF DRAWING(S) - The figure shows the elevation of the an intravascular heat transfer element.

Flexible **cooling** element (14)  
Heat transfer segments (20,22,24)  
Bellows (25,27)  
Grooves (26,30,34)  
Ridges (28,32,36)  
pp; 42 DwgNo 3/9

Derwent Class: B07; P32

International Patent Class (Main): A61F-007/00

International Patent Class (Additional): A61F-007/12

10/7/29 (Item 29 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013065649 \*\*Image available\*\*

WPI Acc No: 2000-237521/200020

Catheter for inducing hyperthermia or hypothermia comprises an elongate flexible catheter, fluid lumen(s), a heat exchanger and a body-fluid channeling sleeve

Patent Assignee: RADIANT MEDICAL INC (RADI-N)

Inventor: DINEEN M T; GINSBURG R; MACHOLD T R

Number of Countries: 089 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200010494	A1	20000302	WO 99US18939	A	19990820	200020 B
AU 9955741	A	20000314	AU 9955741	A	19990820	200031
EP 1107714	A1	20010620	EP 99942341	A	19990820	200135
			WO 99US18939	A	19990820	
US 20010005791	A1	20010628	US 9315774	A	19930210	200138
			US 94324853	A	19941018	
			US 96584013	A	19960108	
			US 96769931	A	19961219	
			US 98138830	A	19980824	
			US 2000739134	A	20001215	
US 20010047196	A1	20011129	US 9315774	A	19930210	200202
			US 94324853	A	19941018	
			US 96584013	A	19960108	
			US 96769931	A	19961219	
			US 98138830	A	19980824	
			US 2000739427	A	20001215	
JP 2002523138	W	20020730	WO 99US18939	A	19990820	200264
			JP 2000565819	A	19990820	

Priority Applications (No Type Date): US 98138830 A 19980824; US 9315774 A 19930210; US 94324853 A 19941018; US 96584013 A 19960108; US 96769931 A 19961219; US 2000739134 A 20001215; US 2000739427 A 20001215

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes  
WO 200010494 A1 E 122 A61F-007/00

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9955741 A A61F-007/00 Based on patent WO 200010494

EP 1107714 A1 E A61F-007/00 Based on patent WO 200010494

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI

US 20010005791 A1 A61F-007/00 CIP of application US 9315774

CIP of application US 94324853

CIP of application US 96584013

CIP of application US 96769931

Div ex application US 98138830

CIP of patent US 5486208

CIP of patent US 5837003

CIP of patent US 6033383

US 20010047196 A1 A61F-007/00 CIP of application US 9315774

CIP of application US 94324853

CIP of application US 96584013

CIP of application US 96769931

Div ex application US 98138830

CIP of patent US 5486208

CIP of patent US 5837003

CIP of patent US 6033383

JP 2002523138 W 106 A61F-007/12 Based on patent WO 200010494

Abstract (Basic): WO 200010494 A1

NOVELTY - A **catheter** insertable into an anatomical structure of a mammalian patient through which body fluid may flow to a target region and is operative to effect in situ heat exchange with the body fluid to alter temperature of the target region comprises an elongate flexible **catheter** having two ends; at least one fluid lumen; a heat exchanger; and a body fluid channeling sleeve.

DETAILED DESCRIPTION - The **catheter** comprises an elongate flexible **catheter** having two ends, proximal and distal and the entire length of the **catheter** is defined as the distance from the proximal end to its distal end; at least one fluid lumen where the thermal exchange fluid may be circulated; a heat exchanger in the **catheter** to exchange heat between body fluid in heat exchange proximity to the heat exchanger and the heat exchange fluid circulating through the heat exchanger; a body fluid channeling sleeve (formed at a segment of the **catheter** where a portion of the heat exchanger is located) has a fluid flow space located between the channeling sleeve and the **catheter** with a body fluid inlet near the heat exchanger and an outlet far from the heat exchanger. The body fluid will enter the flow space through the body fluid inlet and flows through the flow space in heat exchange proximity to at least a portion of the heat exchanger and then out of the body fluid outlet to a conduit in fluid communication with the target region of the patient's body.

An INDEPENDENT CLAIM is also included for a system for controllably affecting the temperature of a patient comprising a **catheter** as above with an insertion portion extending from the distal end to a point short of the proximal end, a heat exchanger with fins extending from its surface increasing the surface area of the heat exchanger to enhance heat exchange; a sensor that generates a signal in response to the data sensed from the patient; a manual input where an operator may specify a target parameter; a controller unit for receiving the signal and the target parameter and controlling the operation of the **catheter** in response to the sensed data and in relation to the target parameter.

USE - To intentionally induce hyperthermia or **hypothermia**, particularly **hypothermia** in the body. **Hypothermia** is recognized in the medical community as a neuroprotectant during cardiovascular surgery or neurosurgery. It is also beneficial for victims of head trauma, brain attack ( **stroke** ), spinal surgery or surgery where blood

flow may be interrupted or compromised to the brain or spinal cord i.e. aneurysm repair.

ADVANTAGE - The heat exchange **catheter** is capable of heating or **cooling** liquid i.e. blood within the body and directing that liquid after it is heated or **cooled** to a target location (affecting the temperature of that target region) using only the patient's (mammalian) own heart as pump.

DESCRIPTION OF DRAWING(S) - A simplified perspective view of a variation of the heat transfer **catheter** in place within the left common carotid artery.

in-flow lumen (60)

finned balloon portion (362)

descending aorta (364)

blood vessel (366)

**catheter** shaft (368)

pp; 122 DwgNo 17A/24

Derwent Class: B07; P32; P34

International Patent Class (Main): A61F-007/00; A61F-007/12

International Patent Class (Additional): A61M-025/00; A61M-039/00

ADVANTAGE - Reduced risk of **ischemia** and or cardiac arrhythmia.  
DESCRIPTION OF DRAWING(S) - The drawing shows use of a heat transfer element.

Fluid supply (1)

**Catheter** (12)

Heat transfer element (14)

pp; 28 DwgNo 1/4

Derwent Class: P31; P32; S05

International Patent Class (Main): A61F-007/00

International Patent Class (Additional): A61B-019/00

10/7/17 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014086271 ... \*\*Image available\*\*

WPI Acc No: 2001-570485/200164

*one of the inventors*

**Therapeutic hypothermia establishing kit e.g. for treating brain trauma and brain ischemia such as that caused by cardiac arrest by inducing hypothermia in patient**

Patent Assignee: ALSIUS CORP (ALSI-N)

Inventor: WORTHEN W J

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200156517	A1	20010809	WO 2001US3576	A	20010202	200164 B
AU 200133296	A	20010814	AU 200133296	A	20010202	200173
US 6460544	B1	20021008	US 99266452	A	19990311	200269
			US 2000498499	A	20000204	

Priority Applications (No Type Date): US 2000498499 A 20000204; US 99266452 A 19990311

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200156517 A1 E 14 A61F-007/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200133296 A A61F-007/00 Based on patent WO 200156517

US 6460544 B1 A61B-019/00 CIP of application US 99266452

Abstract (Basic): WO 200156517 A1

NOVELTY - The kit has a high **cooling** capacity **catheter** which is advanced into the patient's central **venous** system to quickly **cool** the patient to, e.g., 32 degrees C. Once **hypothermia** has been established, the high capacity **catheter** is removed and replaced with a lower **cooling** capacity **catheter** which maintains a desired reduced temperature.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method for establishing and maintaining a predetermined temperature in a patient

USE - For **cooling** patients for therapeutic purposes. For treating brain trauma and brain **ischemia** such as that caused by cardiac arrest by inducing **hypothermia** in a patient

ADVANTAGE - The lower capacity **catheter** can be configured as a central **venous** **catheter** for permitting **catheter** to be used for multiple functions. Alternatively, high **cooling** capacity **catheter** can be used to attenuate a fever and lower the patient's body temperature to normal, with the lower capacity **catheter** being used to maintain normal body temperature.

DESCRIPTION OF DRAWING(S) - The figure shows a flow chart of the invention for establishing and maintaining **hypothermia** in a patient.

pp; 14 DwgNo 3/4

Set	Items	Description
S1	75408	'CEREBROVASCULAR ACCIDENT' OR DC='C10.228.140.300.301.' OR DC='C14.907.253.480.' OR 'APOPLEXY' OR 'CEREBRAL STROKE' OR '- CEREBROVASCULAR APOPLEXY' OR 'STROKE' OR 'VASCULAR ACCIDENT, - BRAIN' OR R10:R16
S2	5571	'CATHETERIZATION, CENTRAL VENOUS' OR DC='E2.148.167.' OR '- CENTRAL VENOUS CATHETERIZATION' OR 'VENOUS CATHETERIZATION, C-ENTRAL'
S3	168342	'BLOOD PRESSURE' OR DC='G9.330.612.114.' OR 'SYSTOLIC PRESSURE' OR R8:R11
S4	9238	'HYPOTHERMIA, INDUCED' OR DC='E3.607.' OR 'ANESTHESIA, REFRIGERATION' OR 'CRYOANESTHESIA' OR 'GASTRIC HYPOTHERMIA' OR '- HIBERNATION, ARTIFICIAL'
S5	0	S1 AND S2 AND S3 AND S4
S6	346	S1 AND S4
S7	0	S2 AND S6
S8	42	S3 AND S6
S9	126433	CATHETER?
S10	34601	CENTRAL() (VENOUS OR VEIN) OR VENA()CAVA
S11	4	S8 AND S9
S12	0	S10 AND S11

11/3,K/1  
DIALOG(R) File 155:MEDLINE(R)

10669137 20213152 PMID: 10751100

**Effects on dogs of surface-induced hypothermia and rewarming on the right heart function and pulmonary circulation.**

Palo M; Lauri T; Timisjarvi J

University of Oulu, Department of Physiology, Finland.

European journal of applied physiology (GERMANY) Mar 2000, 81 (5)  
p391-6, ISSN 1439-6319 Journal Code: 100954790

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... To study the effects of hypothermia on the right heart function and pulmonary circulation, cardiac **catheterization** was carried out on nine anaesthetized beagle dogs. The dogs were cooled between ice bags...

Descriptors: **Hypothermia, Induced** --adverse effects--AE; \*Pulmonary Circulation--physiology--PH; \*Rewarming--adverse effects--AE; \*Ventricular Function, Right.....  
; **Blood Pressure** --physiology--PH; Body Temperature--physiology--PH; Calibration; Cardiac Output--physiology--PH; Dogs; Electrocardiography; Heart Function Tests; Heart Rate--physiology--PH; Myocardial Contraction --physiology--PH; **Stroke** Volume--physiology--PH

11/3,K/2  
DIALOG(R) File 155:MEDLINE(R)

09121463 97026442 PMID: 8872620

**Cardiovascular responses to beta-stimulation with isoproterenol in deep hypothermia.**

Lauri T

Department of Physiology, University of Oulu, Finland.

Journal of applied physiology (Bethesda, Md. : 1985) (UNITED STATES)

Aug 1996, 81 (2) p573-7, ISSN 8750-7587 Journal Code: 8502536

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

...was to investigate the effects of beta-stimulation in deep (25 degrees C) hypothermia. Cardiac **catheterization** was performed on seven anesthetized beagle dogs. They were cooled between ice bags down to...

Descriptors: Adrenergic beta-Agonists--pharmacology--PD; \*Hemodynamics --drug effects--DE; \* **Hypothermia, Induced** ; \*Isoproterenol--pharmacology --PD; Algorithms; Blood Gas Analysis; **Blood Pressure** --drug effects--DE; **Blood Pressure** --physiology--PH; Body Temperature--drug effects--DE; Body Temperature--physiology--PH; Calibration; Dogs; Electrocardiography; Heart Rate--drug effects--DE; Heart Rate--physiology--PH; **Stroke** Volume--drug effects--DE; **Stroke** Volume--physiology--PH

11/3,K/3  
DIALOG(R) File 155:MEDLINE(R)

04569063 84256422 PMID: 6146304

**Increase of myocardial oxygen consumption due to active diastolic wall tension.**

Baller D; Wolpers H G; Hoeft A; Korb H; Rosick A; Hellige G; Bretschneider H J

Basic research in cardiology (GERMANY, WEST) Mar-Apr 1984, 79 (2)

p176-85, ISSN 0300-8428 Journal Code: 0360342

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... on alterations in ventricular diastolic properties. 13 closed-chest experiments were carried out in clinical **catheterization** technique with situations of high PLVD (18-50 mm Hg) relative to volume induced by...

... wall tension (E5) was calculated from PLVD, mean ventricular diastolic volume estimated from endsystolic and **stroke** volume, diastolic time and heart rate in ml O<sub>2</sub>/min X 100 g. During pacing...

; Adrenergic beta-Antagonists--pharmacology--PD; **Blood Pressure** ; Cardiac Pacing, Artificial; Cardiac Volume; Catecholamines--pharmacology--PD; Diastole; Dogs; Energy Metabolism; Heart Rate; Heart Ventricle--physiology--PH; **Hypothermia, Induced** ; Myocardial Contraction--drug effects--DE; Tachycardia--physiopathology--PP

11/3,K/4

DIALOG(R)File 155:MEDLINE(R)

02643644 77231496 PMID: 881882

**Induced hypothermia in dogs with acute myocardial infarction and shock.**

Boyer N H; Gerstein M M

Journal of thoracic and cardiovascular surgery (UNITED STATES) Aug 1977

, 74 (2) p286-94, ISSN 0022-5223 Journal Code: 0376343

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... myocardial infarction with shock (AMI/S) was produced in 46 anesthetized "closed-chest" dogs by **catheter** injection of metallic mercury into the circumflex coronary artery. Twenty-four dogs were kept normothermic...

... and myocardial oxygen consumption by an estimated 30 to 40 percent, while cardiac output (CO), **stroke** volume, and **stroke** work were unchanged. Left ventricular end-diastolic pressure (LVEDP) was reduced by 40 percent during...

... percent on rewarming. HR during rewarming increased substantially more than CO and thereby significantly reduced **stroke** volume.

Descriptors: Disease Models, Animal; \* **Hypothermia, Induced** ; \*Myocardial Infarction--physiopathology--PP; \*Shock, Cardiogenic--physiopathology--PP; Acute Disease; **Blood Pressure** ; Cardiac Output; Dogs; Heart--physiopathology--PP; Heart Block--physiopathology--PP; Heart Rate; Myocardial Contraction...



File 155:MEDLINE(R) 1966-2003/Jan W4  
 File 5:Biosis Previews(R) 1969-2003/Jan W4  
     (c) 2003 BIOSIS  
 File 73:EMBASE 1974-2003/Jan W4  
     (c) 2003 Elsevier Science B.V.  
 File 34:SciSearch(R) Cited Ref Sci 1990-2003/Jan W4  
     (c) 2003 Inst for Sci Info  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
     (c) 1998 Inst for Sci Info  
 File 144:Pascal 1973-2003/Jan W3  
     (c) 2003 INIST/CNRS  
 File 6:NTIS 1964-2003/Feb W1  
     (c) 2003 NTIS, Intl Cpyrght All Rights Res  
 File 2:INSPEC 1969-2003/Jan W3  
     (c) 2003 Institution of Electrical Engineers  
 File 8:Ei Compendex(R) 1970-2003/Jan W3  
     (c) 2003 Elsevier Eng. Info. Inc.  
 File 99:Wilson Appl. Sci & Tech Abs 1983-2003/Dec  
     (c) 2003 The HW Wilson Co.  
 File 65:Inside Conferences 1993-2003/Jan W4  
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 File 94:JICST-EPlus 1985-2003/Nov W3  
     (c) 2003 Japan Science and Tech Corp(JST)  
 File 35:Dissertation Abs Online 1861-2003/Jan  
     (c) 2003 ProQuest Info&Learning

Set	Items	Description
S1	315028	STROKE OR STROKES OR TIA
S2	51588	(CEREBROVASCULAR OR VASCULAR) () ACCIDENT? ? OR APOPLEXY
S3	722604	ISCHEMI? ?
S4	92445	HYPOTHERMI?
S5	619438	COOLING OR COOL OR COOLS OR COOLED
S6	785812	(BLOOD OR ARTERIAL) () PRESSURE
S7	449013	CATHETER?
S8	114597	CENTRAL() (VEIN OR VENOUS) OR VENA() CAVA
S9	21087	HEAT() EXCHANGE
S10	1256	S1:S3 AND S4:S5 AND S6
S11	161	S8(S) S4:S5(S) S7
S12	1	S10 AND S11
S13	7174040	THERAP?/DE OR TREATMENT?/DE
S14	286	S10 AND S13
S15	832723	VEIN OR VENOUS OR VENA OR VEINS
S16	43	S14 AND S15
S17	4	S7 AND S16
S18	4	S17 NOT S12
S19	2	RD (unique items)
S20	79	S10 AND S7
S21	58	S4:S5(S) S7 AND S20
S22	14	S15 AND S21
S23	25	S15 AND S20
S24	20	S23 NOT (S12 OR S18)
S25	14	RD (unique items)
S26	3	S25/2003 OR S25/2002 OR S25/2001 OR S25/2000
S27	11	S25 NOT S26
S28	209	S1:S3/DE AND S4:S5/DE AND S6/DE
S29	10	S7 AND S28
S30	7	S29 NOT (S24 OR S12 OR S18)
S31	7	RD (unique items)
S32	2	S31/2003 OR S31/2002 OR S31/2001 OR S31/2000
S33	5	S31 NOT S32

12/6/1 (Item 1 from file: 155)  
05078840 86162025 PMID: 3830446

Cardiovascular adaptability to acute hypercalcemia in the dog. The role of peroperative myocardial ischemia ]

Adaptabilite cardiovasculaire a une hypercalcemie aigue chez le chien.  
Role de l' ischemie myocardique peroperatoire.

1985

19/6/1 (Item 1 from file: 155)  
10782160 20336783 PMID: 10876220

**Retrograde venous perfusion with hypothermic saline and adenosine for protection of the ischemic spinal cord.**  
Jul 2000

19/6/2 (Item 1 from file: 73)  
06407576 EMBASE No: 1996071109

**Effect of mild hypothermia on ischemia -induced release of endothelin-1 in dog brain**

1996  
?t19/3,k/2

19/3,K/2 (Item 1 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2003 Elsevier Science B.V. All rts. reserv.

06407576 EMBASE No: 1996071109

**Effect of mild hypothermia on ischemia -induced release of endothelin-1 in dog brain**

Takasu A.; Yagi K.-I.; Okada Y.  
Dept Traumatology Critical Care Med, National Defense Medical College,  
3-2 Namiki,Tokorozawa, Saitama 359 Japan  
Resuscitation ( RESUSCITATION ) (Ireland) 1996, 31/1 (59-64)  
CODEN: RSUSB ISSN: 0300-9572  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

**Effect of mild hypothermia on ischemia -induced release of endothelin-1 in dog brain**

...in the physiologic or pathophysiologic regulation of cerebral circulation. To evaluate the effect of mild **hypothermia** on the cerebral concentration of ET-1 and on the cerebral metabolism of oxygen after complete global cerebral **ischemia**, we occluded the ascending aorta and caval **veins** of 9 dogs for 15 min. A fiberoptic **catheter** was inserted into the sagittal sinus to monitor **venous** oxygen saturation (S(SOinf 2)) continuously. Blood samples were collected 30 min before and 30 min, 1 h, 2 h, 4 h and 6 h after the **ischemic** insult. Concentrations of ET-1 were assayed in the blood of the sagittal sinus and...

...control Group 1 (pulmonary artery temperature 38.5degreeC) (n = 4) with those in the mildly **hypothermic** Group 2 (pulmonary artery temperature 34.0degreeC) (n = 5) by surface **cooling** induced before and maintained during and after **ischemia** for 6 h. Following **ischemia**, the plasma concentration difference of ET-1 (sagittal sinus-arterial) was significantly decreased in Group...

...05). Differences in S(SOinf 2) between the two groups were not statistically significant. Mild **hypothermia** reduced the ET-1 release in the cerebral circulation but did not improve cerebral oxygen metabolism after complete cerebral **ischemia**. Findings indicated that the decrease in ET-1 induced by mild **hypothermia** contributes to the improvement of the cerebral microcirculation after **ischemia**.

MEDICAL DESCRIPTORS:

\*brain **ischemia** --etiology--et; \*brain **ischemia** -- therapy --th; \*  
**hypothermia**

...tension; article; blood level; blood ph; brain oxygen consumption;  
controlled study; dog; heart output; mean **arterial pressure**; nonhuman;  
priority journal; superior sagittal sinus; **venous** oxygen tension

27/6/1 (Item 1 from file: 155)  
09121463 97026442 PMID: 8872620

Cardiovascular responses to beta-stimulation with isoproterenol in deep hypothermia .  
Aug 1996

27/6/2 (Item 2 from file: 155)  
08715990 96069223 PMID: 7586433

Determinants of cerebral oxygenation during cardiac surgery.  
Nov 1 1995

27/6/3 (Item 3 from file: 155)  
05939473 89011068 PMID: 3049977

Simultaneous retrieval of the heart and liver from a single donor: an evaluation through preservation and transplantation.  
Jul-Aug 1988

27/6/4 (Item 4 from file: 155)  
04006781 83001549 PMID: 6981449

Continuous monitoring of mixed venous oxygen saturation in cardiac surgery.  
Sep 1982

27/6/5 (Item 1 from file: 73)  
07652541 EMBASE No: 1999139900

Segment VIII resection of the cirrhotic liver under continuous pringle maneuver with in situ cooling followed by temporary portal decompression  
1999

27/6/6 (Item 2 from file: 73)  
07033248 EMBASE No: 1997313264

Cerebral oxygenation during warming after cardiopulmonary bypass  
1997

27/6/7 (Item 3 from file: 73)  
05421057 EMBASE No: 1993189156

Long-term evaluation of prosthetic mitral valves in sheep  
1993

27/6/8 (Item 1 from file: 34)  
06152202 Genuine Article#: XY236 Number of References: 21

Title: The effects of intravenous anesthetics on intracranial pressure and cerebral perfusion pressure in two feline models of brain edema (ABSTRACT AVAILABLE)

Publication date: 19970900

27/6/9 (Item 2 from file: 34)  
04916989 Genuine Article#: UR490 Number of References: 92

Title: THE EFFECT OF AGE ON SUSCEPTIBILITY TO BRAIN-DAMAGE IN A MODEL OF GLOBAL HEMISPHERIC HYPOXIA- ISCHEMIA (Abstract Available)

27/6/10 (Item 3 from file: 34)  
04487732 Genuine Article#: TF735 Number of References: 26

Title: SEVOFLURANE IMPROVES NEUROLOGICAL OUTCOME AFTER INCOMPLETE CEREBRAL-ISCHEMIA IN RATS (Abstract Available)

27/6/11 (Item 4 from file: 34)

03435881 Genuine Article#: PE608 Number of References: 204  
Title: MONITORING DURING PEDIATRIC CARDIAC ANESTHESIA (Abstract Available)  
?t27/7/9

27/7/9 (Item 2 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

04916989 Genuine Article#: UR490 Number of References: 92  
Title: THE EFFECT OF AGE ON SUSCEPTIBILITY TO BRAIN-DAMAGE IN A MODEL OF  
GLOBAL HEMISPHERIC HYPOXIA- ISCHEMIA  
Author(s): YAGER JY; SHUAIB A; THORNHILL J  
Corporate Source: ROYAL UNIV HOSP, DEPT PEDIAT NEUROL, 103 HOSP  
DR/SASKATOON/SK S7N 0W8/CANADA/; ROYAL UNIV HOSP, DEPT INTERNAL MED  
NEUROL/SASKATOON/SK S7N 0W8/CANADA/; ROYAL UNIV HOSP, DEPT  
PHYSIOL/SASKATOON/SK S7N 0W8/CANADA/; UNIV SASKATCHEWAN, COLL  
MED, SASKATCHEWAN STROKE RES CTR/SASKATOON/SK S7N 0W8/CANADA/  
Journal: DEVELOPMENTAL BRAIN RESEARCH, 1996, V93, N1-2 (MAY 31), P143-154  
ISSN: 0165-3806  
Language: ENGLISH Document Type: ARTICLE  
Abstract: **Stroke** occurs in all age groups, ranging from the newborn to  
the elderly. The immature brain is generally believed to be more  
resistant to the damaging effects of cerebrovascular compromise  
compared to the more mature brain. However, recent experiments suggest  
that the correlation between brain damage and age is not linear. To  
determine the effects of age and development on hypoxic- **ischemic**  
brain damage, we developed a model whereby rats of increasing age  
received identical cerebrovascular insults, and assessed  
neuropathologic outcome. Male Wistar rats of 1, 3, 6, and 9 weeks and 6  
months underwent unilateral common carotid artery ligation and exposure  
to 12% oxygen for 35 min. Animals were all spontaneously breathing  
under Light halothane anesthesia (0.5%). Core temperatures were  
maintained at 37 degrees C. Blood pressures were monitored via  
indwelling carotid artery **catheters** on the side ipsilateral to the  
carotid artery ligation. Cerebral blood flow was assessed in separate  
groups utilizing Laser Doppler flowmetry. Physiologic monitoring  
revealed that under these experimental conditions, mean arterial **blood**  
**pressure** and cerebral blood flow decreased to the same extent in  
each of the age groups, verifying that all animals experienced an  
identical insult. Neuropathologic assessment at 7 days of recovery  
showed that brain damage was most severe in the 1 and 3 week old  
animals followed by those that were 6 months. The 6 and 9 week old  
groups had significantly less injury than the other 3 age groups.  
Kippocampal damage was most severe in the 3 week and 6 month old rats  
compared to all other age groups. Our findings contrast previously held  
beliefs regarding the enhanced tolerance of the immature brain to  
hypoxic- **ischemic** damage and demonstrates that, in a physiologically  
controlled in vivo model of hemispheric global **ischemia**, (1) the  
immature brain is, in fact, less resistant to hypoxic- **ischemic** brain  
damage than its adult counterpart, (2) the brain damaging effects of  
hypoxic- **ischemia** are age dependent, but do not increase linearly with  
advancing age and development, and (3) the intermediate age groups are  
more tolerant to hypoxic- **ischemic** brain injury than either very young  
or more mature ages.

10782160 20336783 PMID: 10876220

**Retrograde venous perfusion with hypothermic saline and adenosine for protection of the ischemic spinal cord.**

Parrino P E; Kron I L; Ross S D; Shockey K S; Fisher M J; Gaughen J R; Kallmes D F; Kern J A; Tribble C G

Departments of Surgery, Division of Thoracic and Cardiovascular Surgery, and Radiology, University of Virginia Health Sciences Center, Charlottesville, VA 22908, USA.

Journal of vascular surgery : official publication, the Society for Vascular Surgery and International Society for Cardiovascular Surgery, North American Chapter (UNITED STATES) Jul 2000, 32 (1) p171-8, ISSN 0741-5214 Journal Code: 8407742

Contract/Grant No.: 5F32HL09558; HL; NHLBI

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

**PURPOSE:** Spinal cord injury and the resultant postoperative paraplegia are devastating complications of thoracic aortic surgery, for which no widely accepted protective interventions exist. We hypothesized that retrograde **venous perfusion-cooling** of the spinal cord with a **hypothermic** saline and adenosine solution would protect it from **ischemic** injury caused by thoracic aortic occlusion. **METHODS:** Adult domestic swine of either sex (weight range, 20 to 30 kg) were intubated and ventilated. A left thoracotomy was performed. The accessory hemiazygous **vein** was divided, and a **catheter** was inserted distally. The aorta was clamped at the left subclavian artery. The **venous catheter** was not used in the animals in the control group (n = 7); in the animals in the experimental group (n = 7), a cold (4 degrees C) saline and adenosine solution was infused into the accessory hemiazygous **vein**. After 30 minutes, the clamp and **catheter** were removed, and the chest was closed. A blinded observer evaluated the animals' hind-leg motor activity 24 hours later. The Tarlov scale was used: 0, complete paralysis; 1, minimal movement; 2, stands with assistance; 3, stands alone; 4, weak walk; 5, normal gait. The animals' rectal temperatures were measured at the end of the experiment, and **blood pressure** was measured throughout. Two other groups were studied to assess the effect of the intervention on spinal cord temperature. **RESULTS:** The animals in the control group had a mean Tarlov score of 1.7 +/- 0.6; the animals in the experimental group had a mean Tarlov score of 4.9 +/- 0.1 (P <.01). The animals in the experimental group had a significantly greater drop in spinal cord temperature than those in the control group (4.05 +/- 0.6 degrees C vs 0.58 +/- 0.12 degrees C; P <.01). No significant difference in rectal temperatures was found, nor did any arrhythmias or hypotensive episodes occur in either group. Perfusion of the spinal cord was confirmed with angiography by using this approach. **CONCLUSION:** Retrograde **venous perfusion-cooling** of the spinal cord with a **hypothermic** saline and adenosine solution protects the cord from **ischemic** injury caused by clamping of the thoracic aorta.

Record Date Created: 20000802

**Retrograde venous perfusion with hypothermic saline and adenosine for protection of the ischemic spinal cord.**

... thoracic aortic surgery, for which no widely accepted protective interventions exist. We hypothesized that retrograde **venous perfusion-cooling** of the spinal cord with a **hypothermic** saline and adenosine solution would protect it from **ischemic** injury caused by thoracic aortic occlusion. **METHODS:** Adult domestic swine of either sex (weight range...

... to 30 kg) were intubated and ventilated. A left thoracotomy was performed. The accessory hemiazygous **vein** was divided, and a **catheter** was inserted distally. The aorta was clamped at the left subclavian artery. The **venous catheter** was not used in the animals in the control group (n = 7); in the animals...

... a cold (4 degrees C) saline and adenosine solution was infused into the accessory hemiazygous vein . After 30 minutes, the clamp and catheter were removed, and the chest was closed. A blinded observer evaluated the animals' hind-leg...

... normal gait. The animals' rectal temperatures were measured at the end of the experiment, and blood pressure was measured throughout. Two other groups were studied to assess the effect of the intervention...

... Perfusion of the spinal cord was confirmed with angiography by using this approach. CONCLUSION: Retrograde venous perfusion-cooling of the spinal cord with a hypothermic saline and adenosine solution protects the cord from ischemic injury caused by clamping of the thoracic aorta.

Descriptors: Hypothermia , Induced--methods--MT; \*Intraoperative Complications--prevention and control--PC; \* Ischemia --prevention and control--PC; \*Perfusion--methods--MT; \*Spinal Cord--blood supply--BS

23/7,K/2 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

09121463 97026442 PMID: 8872620

Cardiovascular responses to beta-stimulation with isoproterenol in deep hypothermia .

Lauri T

Department of Physiology, University of Oulu, Finland.

Journal of applied physiology (Bethesda, Md. : 1985) (UNITED STATES)

Aug 1996, 81 (2) p573-7, ISSN 8750-7587 Journal Code: 8502536

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The aim of this study was to investigate the effects of beta-stimulation in deep (25 degrees C) hypothermia . Cardiac catheterization was performed on seven anesthetized beagle dogs. They were cooled between ice bags down to 25 degrees C and received isoproterenol administered intravenously three times: at the normal body temperature (37 degrees C) before cooling , after cooling at 25 degrees C, and after rewarming at 37 degrees C. Circulatory function was measured for every 1 degree C of temperature change. Isoproterenol infusion at 37 degrees C induced cardiac acceleration, including the increases of heart rate, cardiac output, and peak first derivative of the left ventricular pressure curve. Systemic vascular and mean outflow resistances and mean aortic pressure decreased. During cooling , shivering thermogenesis continued, even down to 25 degrees C. At 25 degrees C, cardiac acceleration after isoproterenol infusion did not exist but relaxation rate increased slightly. Systemic vascular and mean outflow resistances decreased, but left ventricular end-diastolic and filling pressures increased. beta-Stimulation at normal body temperature increases shivering thermogenesis during cooling . The venous return to the left ventricle at 25 degrees C increased after isoproterenol infusion while systemic vascular resistance decreased, indicating systemic vasodilatation. This increase in preload is probably due to vasoconstriction in pulmonary vessels, which may be mediated by prejunctional beta-adrenoceptors. For cardiac inotropy, the isoproterenol had no physiologically significant effects at 25 degrees C. After rewarming at 37 degrees C, the effects of isoproterenol were physiologically similar to the effects at the same temperature before cooling .

Record Date Created: 19970123

Cardiovascular responses to beta-stimulation with isoproterenol in deep hypothermia .

... this study was to investigate the effects of beta-stimulation in deep (25 degrees C) hypothermia . Cardiac catheterization was performed on seven anesthetized beagle dogs. They were cooled between ice bags down to 25 degrees C and received isoproterenol administered intravenously three times: at the normal body temperature (37 degrees C) before cooling , after cooling at 25 degrees C, and after rewarming at 37 degrees C.

Circulatory function was measured...

... ventricular pressure curve. Systemic vascular and mean outflow resistances and mean aortic pressure decreased. During **cooling**, shivering thermogenesis continued, even down to 25 degrees C. At 25 degrees C, cardiac acceleration...

... diastolic and filling pressures increased. beta-Stimulation at normal body temperature increases shivering thermogenesis during **cooling**. The **venous** return to the left ventricle at 25 degrees C increased after isoproterenol infusion while systemic...

...the effects of isoproterenol were physiologically similar to the effects at the same temperature before **cooling**.

Descriptors: Adrenergic beta-Agonists--pharmacology--PD; \*Hemodynamics --drug effects--DE; \* **Hypothermia**, Induced; \*Isoproterenol--pharmacology --PD; Algorithms; Blood Gas Analysis; **Blood Pressure** --drug effects--DE; **Blood Pressure** --physiology--PH; Body Temperature--drug effects--DE; Body Temperature--physiology--PH; Calibration; Dogs; Electrocardiography; Heart Rate--drug effects--DE; Heart Rate--physiology--PH; **Stroke** Volume --drug effects--DE; **Stroke** Volume--physiology--PH

23/7,K/3 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

08715990 96069223 PMID: 7586433

**Determinants of cerebral oxygenation during cardiac surgery.**

Nollert G; Mohnle P; Tassani-Prell P; Reichart B

Department of Cardiac Surgery, Klinikum Grosshadern, University of Munich, Germany.

Circulation (UNITED STATES) Nov 1 1995, 92 (9 Suppl) pII327-33,

ISSN 0009-7322 Journal Code: 0147763

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: Neuropsychological deficits after cardiac surgery are attributed to the side effects of cardiopulmonary bypass (CPB). To protect the brain from **ischemic** damage, the influences of temperature, **blood pressure**, blood gases, acid-base status, and hemodilution on cerebral oxygenation have to be elucidated and quantified. METHODS: Forty-one consecutive patients were investigated during cardiac surgery while on CPB. Operative management included moderate **hypothermia** of 26 degrees C and the alpha-stat pH management. With near-infrared spectrophotometry, changes in oxygenated hemoglobin (HbO2, representing oxygen delivery) and oxidized cytochrome a,a3 (CtO2, cellular oxygenation) in brain tissue were obtained noninvasively. In addition, **venous** saturation of the brain was measured via a **catheter** in the jugular bulb (SBJO2). The influence of operative management parameters on cerebral oxygenation was calculated by univariate and multiple regression analyses. RESULTS: Before and after CPB there was no significant multivariate determinant of cerebral oxygenation. During CPB, HbO2 depended solely on PCO2 ( $P < .01$ ;  $r = .89$ ). CtO2 was determined by pH ( $P < .01$ ), esophageal temperature ( $P < .01$ ), PCO2 ( $P < .01$ ), and Hb ( $P < .01$ ). These parameters explained nearly all changes of the cytochrome measurements during CPB ( $r = .99$ ). Arterial PCO2 ( $P < .01$ ) and pH ( $P < .01$ ) influenced brain **venous** oxygen saturation (SBJO2;  $r = .98$ ). CONCLUSIONS: Cerebral oxygenation is autoregulated during cardiac surgery before and after CPB. During CPB, Hb, temperature, pH, and PCO2 determined at least 85% of all changes in cerebral oxygenation. The main causes of impaired cerebral oxygenation are the decrease in Hb with hemodilution, vasoconstriction due to hypocapnia, and the leftward shift of the Hb binding curve in alkalosis and **hypothermia**.

Record Date Created: 19951228

...are attributed to the side effects of cardiopulmonary bypass (CPB). To protect the brain from **ischemic** damage, the influences of temperature,



**blood pressure** , blood gases, acid-base status, and hemodilution on cerebral oxygenation have to be elucidated and...

... one consecutive patients were investigated during cardiac surgery while on CPB. Operative management included moderate **hypothermia** of 26 degrees C and the alpha-stat pH management. With near-infrared spectrophotometry, changes...

... oxidized cytochrome a,a3 (CtO2, cellular oxygenation) in brain tissue were obtained noninvasively. In addition, **venous** saturation of the brain was measured via a **catheter** in the jugular bulb (SBJO2). The influence of operative management parameters on cerebral oxygenation was...

... measurements during CPB (r = .99). Arterial PCO2 (P < .01) and pH (P < .01) influenced brain **venous** oxygen saturation (SBJO2; r = .98). CONCLUSIONS: Cerebral oxygenation is autoregulated during cardiac surgery before and...

... due to hypocapnia, and the leftward shift of the Hb binding curve in alkalosis and **hypothermia** .

23/7,K/4 (Item 4 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

05939473 89011068 PMID: 3049977

**Simultaneous retrieval of the heart and liver from a single donor: an evaluation through preservation and transplantation.**

Morishita Y; Harada T; Moriyama Y; Ikoma A; Koyanagi H; Kamimura R; Kumagae T; Hashiguchi M; Arikawa K; Taira A

Second Department of Surgery, Kagoshima University School of Medicine, Japan.

Journal of heart transplantation (UNITED STATES) Jul-Aug 1988, 7 (4)  
p269-73, ISSN 0887-2570 Journal Code: 8604172

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The simple, safe, and feasible procurement technique for the heart and liver with no warm **ischemic** time is reported. Fifteen mongrel dogs were used to form two recipients and one donor combination in each experiment. A midline incision is extended from the suprasternal notch to the pubis, and a **catheter** is advanced into the aortic root by means of the brachiocephalic artery for monitoring systemic **arterial pressure** and later for coronary vascular washout with a cold cardioplegic solution. Liver mobilization is carried out first when the core temperature of the liver reaches 27 degrees C, obtained with ice slush in the abdominal cavity. As the core temperature of the liver reaches 20 degrees to 22 degrees C, the aorta and inferior **vena** cava are clamped just above the diaphragm. After excision of the liver a second team harvests the heart while it continues to beat. The heart and liver were transplanted orthotopically after simple preservation into a cold solution for 12 and 6 hours, respectively. The maximum survival time was 7 hours in heart transplantation and 16 days in liver transplantation. Our method is a simple, safe, feasible technique for acquiring the heart and liver or other visceral organs for transplantation and may have broad clinical application.

Record Date Created: 19881115

The simple, safe, and feasible procurement technique for the heart and liver with no warm **ischemic** time is reported. Fifteen mongrel dogs were used to form two recipients and one donor...

... experiment. A midline incision is extended from the suprasternal notch to the pubis, and a **catheter** is advanced into the aortic root by means of the brachiocephalic artery for monitoring systemic **arterial pressure** and later for coronary vascular washout with a cold cardioplegic solution. Liver mobilization is carried...

... temperature of the liver reaches 20 degrees to 22 degrees C, the aorta and inferior **vena** cava are clamped just above the diaphragm. After excision of the liver a second team...

...; Triphosphate--metabolism--ME; Dogs; Graft Survival--drug effects--DE ; Hypertonic Solutions--administration and dosage--AD; **Hypothermia** , Induced--methods--MT; Liver--metabolism--ME; Myocardial Contraction; Myocardium--metabolism--ME

23/7,K/5 (Item 5 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

05078840 86162025 PMID: 3830446

**Cardiovascular adaptability to acute hypercalcemia in the dog. The role of peroperative myocardial ischemia ]**

Adaptabilite cardiovasculaire a une hypercalcemie aigue chez le chien. Role de l'**ischemie** myocardique peroperatoire.

Dumont L; Stanley P; Chartrand C

Chirurgie pediatrique (FRANCE) 1985, 26 (6) p362-8, ISSN 0180-5738  
Journal Code: 7804068

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: Completed

Since the hemodynamic consequences of acute hypercalcemia are altered by numerous interferences we have evaluated the role of peroperative myocardial **ischemia** on the adaptability to rapid calcium increment. Twenty-two dogs served as control and 16 were submitted to 1 hour of myocardial **ischemia** along with topical myocardial **cooling** . Each animal was equipped with blood flow transducer positioned around the ascending aorta and with central **venous** and aortic **catheters** . During each study 0.90 mEq of calcium was rapidly injected and hemodynamic data were recorded until base-line resetting. This experimental protocol was carried out 3 hours postoperatively and then daily during one month. Base-line hemodynamic data indicated the presence of myocardial failure in the experimental group in the immediate postoperative period only. Rapid calcium administration elicited transient positive inotropic response, widening of the arterial pulse pressure, reflex bradycardia and no evidence of peripheral vasoconstriction. In the early postoperative period (3 hours after surgery) the failing myocardium is more sensitive to the inotropic effect of hypercalcemia. Twenty-four hours after surgery both groups of animals have the same hemodynamic response to this stress; thereafter for both groups this response gradually decreased and finally stabilized by the 6th to 10th day after surgery. Acute hypercalcemia bears hemodynamic consequences that are amplified early after peroperative myocardial **ischemia** . However in long term this surgical component widely used clinically does not interfered with the cardiovascular adaptability to this pharmacological stress.

Record Date Created: 19860509

**Cardiovascular adaptability to acute hypercalcemia in the dog. The role of peroperative myocardial ischemia ]**

Adaptabilite cardiovasculaire a une hypercalcemie aigue chez le chien. Role de l'**ischemie** myocardique peroperatoire.

... acute hypercalcemia are altered by numerous interferences we have evaluated the role of peroperative myocardial **ischemia** on the adaptability to rapid calcium increment. Twenty-two dogs served as control and 16 were submitted to 1 hour of myocardial **ischemia** along with topical myocardial **cooling** . Each animal was equipped with blood flow transducer positioned around the ascending aorta and with central **venous** and aortic **catheters** . During each study 0.90 mEq of calcium was rapidly injected and hemodynamic data were...

... day after surgery. Acute hypercalcemia bears hemodynamic consequences that are amplified early after peroperative myocardial **ischemia** . However in long term this surgical component widely used clinically does not interfered with the...

; Acid-Base Equilibrium--drug effects--DE; Adaptation, Physiological;  
**Blood Pressure** --drug effects--DE; Constriction; Dogs; Electrolytes  
--metabolism--ME; Heart--drug effects--DE; Intraoperative Period; Vascular  
...

File 73:EMBASE 1974-2003/Jan W4  
(c) 2003 Elsevier Science B.V.  
File 155:MEDLINE(R) 1966-2003/Jan W4

Set	Items	Description
S1	2	HYPOTHERMI? ? (S)CENTRAL() (VEIN OR VENOUS) (3N)CATHETER? (S- ) (STROKE OR ISCHEMI? ?)
S2	2	RD (unique items)

2/3,K/1 (Item 1 from file: 73)  
DIALOG(R) File 73:EMBASE  
(c) 2003 Elsevier Science B.V. All rts. reserv.

11381550 EMBASE No: 2001397455

**Anesthetic issues associated with midline transfacial approaches**

Dodson B.A.

Dr. B.A. Dodson, Department of Anesthesia, Box 0648, University of California, 521 Parnassus Avenue, San Francisco, CA 94142-0648 United States

Operative Techniques in Neurosurgery ( OPER. TECH. NEUROSURG. ) (United States) 2000, 3/1 (16-24)

CODEN: OTNEF ISSN: 1092-440X

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 93

...and nutritional status in addition to cardiovascular, pulmonary, and neurologic systems. Pulmonary function and anti- **ischemic** and antihypertension therapies should be optimized before surgery. Careful perioperative airway management is required. Awake...

...must be sufficient to treat rapid and extensive blood loss. Invasive cardiovascular monitoring, such as **central venous catheters**, pulmonary artery **catheters**, or transesophageal echocardiography, may be necessary. Mild intraoperative hypothermia may be useful for brain protection...

2/3,K/2 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

10885816 20409675 PMID: 10953555

**[Comparison of preoperative and postoperative hemodynamic parameters in replacement or reconstruction of the mitral valve in ischemic dilated cardiomyopathy]**

Uporedivanje preoperativnih i postoperativnih vrednosti hemodinamickih parametara kod zamene i rekonstrukcije mitralnog zaliska u ishemicnoj dilatativnoj kardiomiopatiji.

Mijatov M; Jonjev Z; Konstantinovic Z; Golubovic M; Radovanovic N

Institut za kardiovaskularne bolesti Univerzitetska klinika za kardiovaskularnu hirurgiju, Sremska Kamenica.

Medicinski pregled (YUGOSLAVIA) Jan-Feb 2000, 53 (1-2) p68-73,

ISSN 0025-8105 Journal Code: 2985249R

Document type: Journal Article ; English Abstract

Languages: SERBO-CROATIAN (ROMAN)

Main Citation Owner: NLM

Record type: Completed

INTRODUCTION: **Ischemic** mitral insufficiency is a clinical syndrome described as a consequence of the coronary artery disease...

... mitral annulus dilatation. Mitral regurgitation occurs in different degrees during the natural evolution of the **ischemic** heart disease. The main reason for the existence of mitral regurgitation is global deterioration in...

... and complete myocardial revascularisation. MATERIAL AND METHODS: Complete hemodynamic monitoring was followed by Swan-Ganz **catheter** including: **central venous** pressure, mean pulmonary artery pressure, pulmonary capillary wedge pressure, cardiac output, cardiac index and pulmonary...

File 95:TEME-Technology & Management 1989-2003/Jan W2  
(c) 2003 FIZ TECHNIK  
File 98:General Sci Abs/Full-Text 1984-2003/Dec  
(c) 2003 The HW Wilson Co.  
File 9:Business & Industry(R) Jul/1994-2003/Jan 30  
(c) 2003 Resp. DB Svcs.  
File 16:Gale Group PROMT(R) 1990-2003/Jan 30  
(c) 2003 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 148:Gale Group Trade & Industry DB 1976-2003/Jan 31  
(c)2003 The Gale Group  
File 621:Gale Group New Prod.Annou. (R) 1985-2003/Jan 29  
(c) 2003 The Gale Group  
File 149:TGG Health&Wellness DB(SM) 1976-2003/Jan W2  
(c) 2003 The Gale Group  
File 636:Gale Group Newsletter DB(TM) 1987-2003/Jan 30  
(c) 2003 The Gale Group  
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Jan W4  
(c) 2003 ESPICOM Bus.Intell.  
File 20:Dialog Global Reporter 1997-2003/Jan 31  
(c) 2003 The Dialog Corp.  
File 15:ABI/Inform(R) 1971-2003/Jan 31  
(c) 2003 ProQuest Info&Learning  
File 88:Gale Group Business A.R.T.S. 1976-2003/Jan 30  
(c) 2003 The Gale Group  
File 442:AMA Journals 1982-2003/Apr B2  
(c)2003 Amer Med Assn -FARS/DARS apply  
File 444:New England Journal of Med. 1985-2003/Feb W1  
(c) 2003 Mass. Med. Soc.

Set	Items	Description
S1	278579	STROKE OR STROKES OR TIA
S2	5292	(CEREBROVASCULAR OR VASCULAR) ( )ACCIDENT? ? OR APOPLEXY
S3	49391	ISCHEMI? ?
S4	10572	HYPOTHERMI?
S5	641725	COOLING OR COOL OR COOLS OR COOLED
S6	131435	(BLOOD OR ARTERIAL) ( )PRESSURE
S7	76696	CATHETER?
S8	8893	CENTRAL( ) (VEIN OR VENOUS) OR VENA( )CAVA
S9	13895	HEAT( )EXCHANGE
S10	83	S1:S3(S)S4:S5(S)S6
S11	12	S7(S)S10
S12	0	S8(S)S11
S13	2	S11/2003 OR S11/2002 OR S11/2001 OR S11/2000
S14	10	S11 NOT S13
S15	6	RD (unique items)

15/8/2 (Item 2 from file: 148)

DIALOG(R) File 148: (c)2003 The Gale Group. All rts. reserv.

03523328 SUPPLIER NUMBER: 06466795 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**A close look at Swan-Ganz catheters. (includes related article)**

Feb 15, 1988

WORD COUNT: 2355 LINE COUNT: 00204

SPECIAL FEATURES: illustration; chart; graph; table

INDUSTRY CODES/NAMES: HLTH Healthcare

DESCRIPTORS: Cardiac catheterization--Evaluation; Heart attack--Care and treatment

SIC CODES: 8011 Offices & clinics of medical doctors

FILE SEGMENT: TI File 148

15/8/3 (Item 1 from file: 149)

DIALOG(R) File 149: (c) 2003 The Gale Group. All rts. reserv.

01418046 SUPPLIER NUMBER: 13778797 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Invasive evaluation of patients with heat stroke.**

1993

WORD COUNT: 2927 LINE COUNT: 00311

SPECIAL FEATURES: illustration; table

DESCRIPTORS: Heatstroke--Care and treatment

FILE SEGMENT: HI File 149

15/8/4 (Item 1 from file: 442)

DIALOG(R) File 442: (c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

00055440

**A Prolongation of Hepatic Vascular Exclusion by In Situ Hypothermic Perfusion in Dogs (Article)**

1992;

15/8/5 (Item 2 from file: 442)

DIALOG(R) File 442: (c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

00050074

**Effects of Positive End-Expiratory Pressure on Splanchnic Circulation and Function in Experimental Peritonitis (Article)**

1991;

15/8/6 (Item 3 from file: 442)

DIALOG(R) File 442: (c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

00045160

Copyright (C) 1989 American Medical Association

**Multiple Cholesterol Emboli Syndrome; Bowel Infarction After Retrograde Angiography (CLINICAL OBSERVATIONS)**

1989;

LINE COUNT: 00244 WORD COUNT: 03371

?t15/3,k/1,4

15/3,K/1 (Item 1 from file: 148)

DIALOG(R) File 148: Gale Group Trade & Industry DB

(c)2003 The Gale Group. All rts. reserv.

09654480 SUPPLIER NUMBER: 19105645 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Effects of acadesine on myocardial infarction, stroke, and death following**

surgery: a meta-analysis of the 5 international randomized trials.

(Multicenter Study of Perioperative Ischemia - McSPI - Research Group)

Mangano, Dennis T.

JAMA, The Journal of the American Medical Association, v277, n4, p325(8)

Jan 22, 1997

ISSN: 0098-7484

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 7167

LINE COUNT: 00630

... to receive placebo.

Study Protocol

Prior to surgery, investigators ascertained cardiac history and recorded cardiac **catheterization** information. The use of agents potentially affecting endogenous adenosine concentration (which could complicate the analysis...

...prior to bypass, the usual monitors were applied, anesthetic techniques were standardized, and hemodynamic variables ( **blood pressure** , heart rate) were to be maintained within specific boundaries for trials 1013, 1016, and 1023...

...hemodynamic control were recommended. For all studies, prophylactic use of cardiovascular agents having potential anti- **ischemic** properties (nitrates, calcium channel blockers) was specifically excluded to avoid confounding data interpretation. During cardiopulmonary...

...typically was conducted using a membrane oxygenator and arterial filter with hemodilution and moderate systemic **hypothermia** . Following bypass, the use of inotropic and vasodilating agents (excluding the prophylactic use of anti- **ischemic** medications) and treatment of clinically detected **ischemia** were not controlled; all medications administered were recorded.

Outcomes

For all studies, the primary outcome...

15/3,K/4 (Item 1 from file: 442)

DIALOG(R) File 442:AMA Journals

(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

00055440

#### A Prolongation of Hepatic Vascular Exclusion by In Situ Hypothermic Perfusion in Dogs (Article)

Takeuchi, Toshihiko, MD; Egawa, Hiroto, MD; Yamaoka, Yoshio, MD; Taki, Yoshiro, MD; Ueda, Junichi, MD; Konishi, Yasuhiko, MD; Yamamoto, Naritaka, MD; Kagawa, Ryuzaburo, MD; Washida, Masanobu, MD; Okamoto, Ryoji, MD; Kumada, Kaoru, MD; Ozawa, Kazue, MD

ARCHIVES OF SURGERY

1992; 127: 427 (5)

... of arterial saturation. Muscular relaxation was obtained with pancuronium bromide (0.2 mg/kg). Arterial **blood pressure** was monitored directly through a **catheter** inserted into the right carotid artery. An electrolyte solution containing 5% glucose was infused intravenously...

...was done with group U3, consisting of another five dogs, which underwent 3-hour HVE, **cooling** the liver with the UW solution. /TABULAR DATA OMITTED/ Experiment 2' Additional groups of 3...compared with values in group U2' (P<.05; Fig 4). COMMENT The in situ hepatic **hypothermic** perfusion method was first reported in 1971 by Fortner et al, /18,19/ who perfused the liver with Ringer's solution chilled to 4 /degrees/ C under total HVE. Hepatic **hypothermic** perfusion, however, has drawn little attention, ever since Huguet et al /2/ and other researchers /4, 20/ reported that the human liver can tolerate normothermic **ischemia** resulting from HVE up to 65 minutes. Although Huguet's method is an attractive one...

...thrombi in the hepatic vein and/or IVC. A longer period of isolation, as



hepatic **hypothermic** perfusion would conceivably allow, could relieve the time constraints, for an accurate and unhurried operation...

... that hepatic mitochondria attain a greater state of oxidization after recirculation than before induction of **ischemia** . Although the precise mechanism remains to be clarified, this ...hepatocytes. University of Wisconsin solution is based on lactobionate and melitose as impermeants to suppress **hypothermia** -induced cell swelling. /30/ Its superiority to all existing cold storage solutions has been demonstrated...

...processes in the liver completely. In this regard, the method would more accurately be called **hypothermic** perfusion. A preliminary study showed that excessive **cooling** of the liver during HVE resulted in severe hemodynamic instability and death of the dogs...

... by this in situ perfusion method, effective means of thermal isolation that will allow the **cooling** of the liver without affecting body temperature must also be devised. Our study demonstrates the possibility of applying hepatic **hypothermic** perfusion with UW solution to preserve the liver in situ for the longer periods required...

File 155:MEDLINE(R) 1966-2003/Jan W4  
 File 5:Biosis Previews(R) 1969-2003/Jan W4  
     (c) 2003 BIOSIS  
 File 73:EMBASE 1974-2003/Jan W4  
     (c) 2003 Elsevier Science B.V.  
 File 34:SciSearch(R) Cited Ref Sci 1990-2003/Jan W4  
     (c) 2003 Inst for Sci Info  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
     (c) 1998 Inst for Sci Info  
 File 144:Pascal 1973-2003/Jan W3  
     (c) 2003 INIST/CNRS  
 File 6:NTIS 1964-2003/Feb W1  
     (c) 2003 NTIS, Intl Cpyrght All Rights Res  
 File 2:INSPEC 1969-2003/Jan W3  
     (c) 2003 Institution of Electrical Engineers  
 File 8:Ei Compendex(R) 1970-2003/Jan W3  
     (c) 2003 Elsevier Eng. Info. Inc.  
 File 99:Wilson Appl. Sci & Tech Abs 1983-2003/Dec  
     (c) 2003 The HW Wilson Co.  
 File 65:Inside Conferences 1993-2003/Jan W4  
     (c) 2003 BLDSC all rts. reserv.  
 File 94:JICST-EPlus 1985-2003/Nov W3  
     (c)2003 Japan Science and Tech Corp(JST)  
 File 35:Dissertation Abs Online 1861-2003/Jan  
     (c) 2003 ProQuest Info&Learning

Set	Items	Description
S1	315028	STROKE OR STROKES OR TIA
S2	51588	APOPLEXY OR (CEREBROVASCULAR OR VASCULAR) ( )ACCIDENT? ?
S3	722604	ISCHEMI? ?
S4	92445	HYPOTHERMI?
S5	619438	COOL OR COOLS OR COOLED OR COOLING
S6	1403685	CATHETER? OR TUBE OR TUBES OR TUBULAR OR TUBING
S7	840702	VEIN? ? OR VENOUS OR VENA OR VENAE
S8	192	S1:S3 AND S4:S5 AND S6 AND S7
S9	57757	S6(5N)S7
S10	75	S8 AND S9
S11	315	S4:S5(S)S9
S12	58	S10 AND S11
S13	675032	S1:S3/TI,DE
S14	31	S12 AND S13
S15	17	RD (unique items)
S16	7	S15/2003 OR S15/2002 OR S15/2001 OR S15/2000
S17	10	S15 NOT S16
S18	10	Sort S17/ALL/PY,D

18/6/1 (Item 1 from file: 73)  
10851628 EMBASE No: 2000333006

Minimally invasive cardiac surgery: Surgical techniques and anaesthetic management  
CHIRURGIE CARDIAQUE MINI-INVASIVE: TECHNIQUES CHIRURGICALES ET PARTICULARITES ANESTHESIQUES  
1999

18/6/2 (Item 2 from file: 155)  
09756010 98174523 PMID: 9513337

Mild hypothermia anesthesia for carotid microendoarterectomy in a patient with ischemic heart disease]  
Feb 1998

18/6/3 (Item 3 from file: 155)  
09683990 98120562 PMID: 9458941

Organ pathology following mild hypothermia used as neural rescue therapy in newborn piglets.  
1998

18/6/4 (Item 4 from file: 94)  
03424103 JICST ACCESSION NUMBER: 98A0124583 FILE SEGMENT: JICST-E  
Basic and Clinical Meanings of Oxygen Saturation Measured in Internal Jugular Venous Bulb., 1997

18/6/5 (Item 5 from file: 155)  
08939010 96298749 PMID: 8725410

Hepatic blood flow and right ventricular function during cardiac surgery assessed by transesophageal echocardiography.  
Apr 1996

18/6/6 (Item 6 from file: 5)  
08838767 BIOSIS NO.: 199395128118

Association between gastric intramucosal pH and splanchnic endotoxin, antibody to endotoxin, and tumor necrosis factor-alpha concentrations in patients undergoing cardiopulmonary bypass.  
1993

18/6/7 (Item 7 from file: 73)  
05617947 EMBASE No: 1994011017

Potassium substitution during coronary bypass surgery - Potassium magnesium aspartate versus potassium chloride  
KALIUMSUBSTITUTION BEI KORONARCHIRURGISCHEM EINGRIFFEN: Ksup +-MGsup +sup +-ASPARTAT-KOMPLEX (INZOLEN(R)) VERSUS KALIUMCHLORID  
1993

18/6/8 (Item 8 from file: 5)  
07374782 BIOSIS NO.: 000091001462

SYSTEMIC PATTERN OF FREE RADICAL GENERATION DURING CORONARY BYPASS SURGERY  
1990

18/6/9 (Item 9 from file: 155)  
05078840 86162025 PMID: 3830446

Cardiovascular adaptability to acute hypercalcemia in the dog. The role of peroperative myocardial ischemia ]  
Adaptabilite cardiovasculaire a une hypercalcemie aigue chez le chien. Role de l' ischemie myocardique peroperatoire.  
1985

18/6/10 (Item 10 from file: 5)  
04199042 BIOSIS NO.: 000077025086  
**MYO CARDIAL PRESERVATION EFFECT OF VENOUS DRAINAGE**  
1983  
?t18/3,k/9,10

18/3,K/9 (Item 9 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

05078840 86162025 PMID: 3830446

**Cardiovascular adaptability to acute hypercalcemia in the dog. The role of peroperative myocardial ischemia ]**

Adaptabilite cardiovasculaire a une hypercalcemie aigue chez le chien.  
Role de l' **ischemie** myocardique peroperatoire.

Dumont L; Stanley P; Chartrand C

Chirurgie pediatrique (FRANCE) 1985, 26 (6) p362-8, ISSN 0180-5738  
Journal Code: 7804068

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: Completed

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Adaptabilite cardiovasculaire a une hypercalcemie aigue chez le chien.  
Role de l' **ischemie** myocardique peroperatoire.

... acute hypercalcemia are altered by numerous interferences we have evaluated the role of peroperative myocardial **ischemia** on the adaptability to rapid calcium increment. Twenty-two dogs served as control and 16 were submitted to 1 hour of myocardial **ischemia** along with topical myocardial **cooling** . Each animal was equipped with blood flow transducer positioned around the ascending aorta and with central **venous** and aortic **catheters** . During each study 0.90 mEq of calcium was rapidly injected and hemodynamic data were...

... day after surgery. Acute hypercalcemia bears hemodynamic consequences that are amplified early after peroperative myocardial **ischemia** . However in long term this surgical component widely used clinically does not interfered with the...

18/3,K/10 (Item 10 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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04199042 BIOSIS NO.: 000077025086

**MYO CARDIAL PRESERVATION EFFECT OF VENOUS DRAINAGE**

AUTHOR: BENNETT E V JR; FEWEL J G; GROVER F L; TRINKLE J K

AUTHOR ADDRESS: DIVISION OF CARDIOTHORACIC SURGERY,UTHSCSA, 7703 FLOYD CURL DR, SAN ANTONIO, TEXAS 78284.

JOURNAL: ANN THORAC SURG 36 (2). 1983. 132-142. 1983

FULL JOURNAL NAME: Annals of Thoracic Surgery

CODEN: ATHSA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

**MYO CARDIAL PRESERVATION EFFECT OF VENOUS DRAINAGE**

ABSTRACT: The effect of 3 methods of **venous** drainage on myocardial temperature, coronary blood flow as determined with radioactive microspheres, myocardial metabolites (lactate...

...and glycogen), and left ventricular function were compared before, during and after cardiopulmonary bypass with **hypothermic** , hyperkalemic cardioplegic arrest. **Venous** drainage was established in the 6 dogs in group 1 using a Sarns 51F cavoatrial **catheter** , in the 7 dogs in group 2

using 2 USCI 32F **vena** caval **catheters** with tourniquets, and in the 7 dogs in group 3 using 2 USCI 32F **vena** caval **catheters** without tourniquets. The lowest myocardial temperature was achieved in group 1 (7.26.degree.  $\pm$  0...

...and lactate levels were similar in all 3 groups. Myocardial glycogen levels were maintained during **ischemia** in group 1 (1010  $\pm$  76 mg/dl compared with 686  $\pm$  39 mg/dl in group...

...Left ventricular function, as measured by the maximum rate of rise of left ventricular pressure, **stroke** work and pressure/volume curves, was similar in all groups. The postischemic blood flow data, glycogen levels and ventricular compliance differences suggest that the dogs in group 1 had less **ischemia**.

DESCRIPTORS: DOG CORONARY BLOOD FLOW **ISCHEMIA** HYPO THERMIA LACTATE ATP GLYCOGEN

Set	Items	Description
S1	95991	'CEREBROVASCULAR ACCIDENT' OR DC='C10.228.140.300.301.' OR DC='C14.907.253.480.' OR 'APOPLEXY' OR 'CEREBRAL STROKE' OR '- CEREBROVASCULAR APOPLEXY' OR 'STROKE' OR 'VASCULAR ACCIDENT, - BRAIN' OR R9:R16
S2	5571	'CATHETERIZATION, CENTRAL VENOUS' OR DC='E2.148.167.' OR '- CENTRAL VENOUS CATHETERIZATION' OR 'VENOUS CATHETERIZATION, C-ENTRAL'
S3	9238	'HYPOTHERMIA, INDUCED' OR DC='E3.607.' OR 'ANESTHESIA, REF-RIGERATION' OR 'CRYOANESTHESIA' OR 'GASTRIC HYPOTHERMIA' OR '- HIBERNATION, ARTIFICIAL'
S4	0	S1 AND S2 AND S3
S5	9	S2 AND S3
S6	1	S5/2003 OR S5/2002 OR S5/2001 OR S5/2000
S7	8	S5 NOT S6

7/8/1

DIALOG(R) File 155:MEDLINE(R)

08840539 96196052 PMID: 8610907

**Jugular venous bulb oxyhemoglobin saturation during cardiac surgery: accuracy and reliability using a continuous monitor.**

May 1996

Tags: Comparative Study; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: \*Coronary Artery Bypass; \*Jugular Veins; \*Monitoring, Intraoperative--instrumentation--IS; \*Oxyhemoglobins--analysis--AN; Aged; Cardiopulmonary Bypass; **Catheterization, Central Venous** --instrumentation--IS; Feasibility Studies; Fiber Optics--instrumentation--IS; Heart Valves --surgery--SU; **Hypothermia, Induced** ; Linear Models; Middle Age; Monitoring, Intraoperative--statistics and numerical data--SN; Oximetry --instrumentation--IS; Oxygen--blood--BL; Reproducibility of Results; Rewarming; Surgical Procedures, Elective

CAS Registry No.: 0 (Oxyhemoglobins); 7782-44-7 (Oxygen)

7/8/2

DIALOG(R) File 155:MEDLINE(R)

08727690 96087644 PMID: 7488786

**New technique for retrograde cerebral perfusion during arch aneurysm repair.**

Sep 1995

Tags: Human

Descriptors: \*Aortic Aneurysm--surgery--SU; \*Aortic Aneurysm, Thoracic --surgery--SU; \*Cerebrovascular Circulation; Aneurysm, Dissecting--surgery --SU; Brain Damage, Chronic--prevention and control--PC; Cardiopulmonary Bypass--instrumentation--IS; **Catheterization, Central Venous** --instrumentation--IS; Equipment Design; Heart Arrest, Induced; **Hypothermia, Induced** ; Monitoring, Intraoperative; Transducers, Pressure; Vena Cava, Superior

7/8/3

DIALOG(R) File 155:MEDLINE(R)

08712806 96078768 PMID: 7579110

**Continuous versus intermittent cardiac output measurement in cardiac surgical patients undergoing hypothermic cardiopulmonary bypass.**

Aug 1995

Tags: Human

Descriptors: Cardiac Output; \*Cardiopulmonary Bypass--methods--MT; \***Hypothermia, Induced** ; \*Myocardial Revascularization; \*Thermodilution --methods--MT; Adult; Aged; Anesthesia, General; Bias (Epidemiology); Blood ; Body Temperature; **Catheterization, Central Venous** --instrumentation--IS; Data Display; Middle Age; Monitoring, Intraoperative; Prospective Studies; Respiration; Rewarming; Sensitivity and Specificity; Thermodilution --statistics and numerical data--SN; Time Factors

7/8/4

DIALOG(R) File 155:MEDLINE(R)

08540242 95299072 PMID: 7780080

**Case 2--1995. Continuous retrograde cerebral perfusion as an adjunct to brain protection during deep hypothermic systemic circulatory arrest.**

Apr 1995

Tags: Case Report; Human; Male

Descriptors: Brain Ischemia--prevention and control--PC; \*Cerebrovascular Circulation; \*Heart Arrest, Induced; \***Hypothermia, Induced** ; \*Hypoxia, Brain--prevention and control--PC; Adult; Aortic Aneurysm--surgery--SU; Aortic Aneurysm, Thoracic--surgery--SU; Aortic Valve Insufficiency--surgery --SU; Cardiopulmonary Bypass; **Catheterization, Central Venous** ;

Electroencephalography; Heart Arrest, Induced--methods--MT; Heart Valve Prosthesis; **Hypothermia, Induced** --methods--MT; Perfusion

7/8/5

DIALOG(R) File 155:MEDLINE(R)

07412522 92344454 PMID: 1637214

**Hypothermic thoracic and thoracoabdominal aneurysm operation: a central cannulation technique.**

Aug 1992

Tags: Human; Male

Descriptors: Aortic Aneurysm--surgery--SU; \*Catheterization--methods--MT; \* **Hypothermia, Induced** ; Aged; Aorta, Abdominal; Aorta, Thoracic; **Catheterization, Central Venous** --methods--MT; Constriction; Methods; Middle Age; Postoperative Complications

7/8/6

DIALOG(R) File 155:MEDLINE(R)

07343781 92277904 PMID: 1593811

**[Selective jugular cannulation for hypothermic retrograde cerebral perfusion in thoracic aortic operations (reverse over the wire-catheter method)]**

May 1992

Tags: Case Report; Female; Human

Descriptors: Aorta, Thoracic--surgery--SU; \* **Catheterization, Central Venous** --methods--MT; \*Cerebrovascular Circulation; \* **Hypothermia, Induced** ; \*Jugular Veins; Heart Atrium; Middle Age; Perfusion--methods--MT

7/8/7

DIALOG(R) File 155:MEDLINE(R)

07168364 92095758 PMID: 1728241

**Retrograde cerebral perfusion through a superior vena caval cannula protects the brain.**

Jan 1992

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: \*Brain Ischemia--prevention and control--PC; \*Cerebrovascular Circulation; \*Perfusion--methods--MT; Aorta, Thoracic --surgery--SU; Carbon Dioxide--blood--BL; Cardiopulmonary Bypass; **Catheterization, Central Venous** ; Dogs; **Hypothermia, Induced** ; Oxygen Consumption--physiology--PH; Vascular Resistance--physiology--PH  
CAS Registry No.: 124-38-9 (Carbon Dioxide)

7/8/8

DIALOG(R) File 155:MEDLINE(R)

07010434 91322453 PMID: 1863743

**Increased pulmonary artery perforating potential of pulmonary artery catheters during hypothermia.**

Jun 1991

Tags: Human

Descriptors: Balloon Dilatation--adverse effects--AE; \*Heart Catheterization--adverse effects--AE; \* **Hypothermia, Induced** ; \*Pulmonary Artery--injuries--IN; Balloon Dilatation--instrumentation--IS; **Catheterization, Central Venous** --adverse effects--AE; **Catheterization, Central Venous** --instrumentation--IS; Cold--adverse effects--AE; Equipment Design; Heart Catheterization--instrumentation--IS; Membranes, Artificial; Models, Biological; Polyethylenes; Polyvinyl Chloride; Surface Properties

CAS Registry No.: 0 (Polyethylenes); 9002-86-2 (Polyvinyl Chloride)  
?t7/7/2,4-7

7/7/2



DIALOG(R) File 155:MEDLINE(R)

08727690 96087644 PMID: 7488786

**New technique for retrograde cerebral perfusion during arch aneurysm repair.**

Bartoccioni S; Lanzillo G; deJong A A; Fiaschini P; Martinelli G; Fedeli C; Di Lazzaro D; Mercati U

Division of Cardiac Surgery, Ospedale R. Silvestrini, Perugia, Italy.

Journal of cardiac surgery (UNITED STATES) Sep 1995, 10 (5) p592-3,  
ISSN 0886-0440 Journal Code: 8908809

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Many techniques are used to reduce brain damage during surgery for dissecting aneurysms of the ascending aorta and arch. Recently, new techniques of protection were proposed, consistent with hypothermic circulatory arrest in association with retrograde cerebral perfusion via superior vena cava. We propose a simple, time-saving method, which does not require any manipulation of the heart. We use a multilumen cannula for cardioplegia (D 860-DIDECO FUNDARO') with pressure transducer. This cannula is inserted in superior vena cava by means of a simple purse-string, and linked to the arterial line with a "Y" derivation, allowing retrograde perfusion of the brain and monitoring the perfusion pressure at every moment. The superior vena cava placed downstream from the cannula is closed by a small vascular clamp, to avoid blood reflux in the right atrium. This method is time- and money-saving, is readily available, and can be prepared whenever necessary, also in the middle of the surgical procedure.

Record Date Created: 19960104

7/7/4

DIALOG(R) File 155:MEDLINE(R)

08540242 95299072 PMID: 7780080

**Case 2--1995. Continuous retrograde cerebral perfusion as an adjunct to brain protection during deep hypothermic systemic circulatory arrest.**

McLoughlin T M; Carter W R; King C D

Anesthesia and Operative Service, Walter Reed Army Medical Center, Washington, DC 20307, USA.

Journal of cardiothoracic and vascular anesthesia (UNITED STATES) Apr 1995, 9 (2) p205-14, ISSN 1053-0770 Journal Code: 9110208

Document type: Clinical Conference; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Record Date Created: 19950720

7/7/5

DIALOG(R) File 155:MEDLINE(R)

07412522 92344454 PMID: 1637214

**Hypothermic thoracic and thoracoabdominal aneurysm operation: a central cannulation technique.**

Westaby S

Oxford Heart Centre, John Radcliffe Hospital, England.

Annals of thoracic surgery (UNITED STATES) Aug 1992, 54 (2) p253-8,  
ISSN 0003-4975 Journal Code: 15030100R

Comment in Ann Thorac Surg. 1993 Aug;56(2) 397; Comment in PMID 8347039

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Surgical resection of the descending thoracic and thoracoabdominal aorta is associated with the risk of spinal cord ischemic injury, particularly in patients with aortic dissection. Hypothermic total cardiopulmonary bypass

with periods of circulatory arrest has been advocated for spinal cord protection with encouraging early results. However, techniques for this procedure are relatively complex. An alternative cannulation technique with venous return from the right atrium through the internal jugular vein and arterial return to the aortic arch is described. This has been used in 6 patients for replacement of the descending thoracic or thoracoabdominal aorta. Despite profound hypothermia and preservation of the principal spinal radicular artery, 1 patient suffered early paraparesis with some recovery but eventually died of multisystem failure. A second elderly patient with severe obstructive airways disease died of respiratory failure 11 days postoperatively. Four patients made a good recovery including 1 with a ruptured thoracoabdominal aneurysm who subsequently required gut resection for ischemic necrosis present preoperatively. This cannulation technique together with profound hypothermia has greatly improved the operating conditions for extensive aneurysms of the thoracoabdominal aorta. Paraparesis occurring despite hypothermic protection and attempted preservation of the spinal cord arterial supply suggests that unfavorable vascular anatomy still predominates in the risk factors for ischemic injury.

Record Date Created: 19920824

7/7/6

DIALOG(R) File 155:MEDLINE(R)

07343781 92277904 PMID: 1593811

**[Selective jugular cannulation for hypothermic retrograde cerebral perfusion in thoracic aortic operations (reverse over the wire-catheter method)]**

Okamoto H; Sato K; Matsuura A; Yasuura K; Abe T; Ogawa H; Hoshino M; Asakura T; Seki A

Division of Thoracic Surgery, Yokkaichi Municipal Hospital.

Kyobu geka. The Japanese journal of thoracic surgery (JAPAN) May 1992, 45 (5) p415-8, ISSN 0021-5252 Journal Code: 0413533

Document type: Journal Article ; English Abstract

Languages: JAPANESE

Main Citation Owner: NLM

Record type: Completed

We have employed hypothermic retrograde total body perfusion via the caval cannulae as a supportive measures to protect the brain and other systemic organs in operations for aortic arch aneurysms or acute aortic dissection. But occasionally unsatisfactory results ensued, because competent valves located in the internal jugular vein near the jugulo-subclavian junction may block retrograde blood flow to the brain from the caval cannula. To cope with this problem, we designed an easy and safe method to cannulate the internal jugular vein transatrially utilizing guidewire and central venous catheter, and thereafter we have used this technique clinically and obtained good results.

Record Date Created: 19920626

7/7/7

DIALOG(R) File 155:MEDLINE(R)

07168364 92095758 PMID: 1728241

**Retrograde cerebral perfusion through a superior vena caval cannula protects the brain.**

Usui A; Hotta T; Hiroura M; Murase M; Maeda M; Koyama T; Tanaka M; Takeuchi E; Yasuura K; Watanabe T; et al

Department of Thoracic Surgery, Nagoya University School of Medicine, Japan.

Annals of thoracic surgery (UNITED STATES) Jan 1992, 53 (1) p47-53, ISSN 0003-4975 Journal Code: 15030100R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Retrograde cerebral perfusion through a superior vena caval cannula is a new technique for protecting the brain during aortic arch operations. In mongrel dogs (n = 10; 13 to 15 kg) we have performed retrograde cerebral perfusion (300 mL/min) by infusing blood through a superior vena caval cannula with aortic and inferior vena caval drainage. We have measured the cerebral tissue blood flow, oxygen consumption, and carbon dioxide exudation during retrograde cerebral perfusion at normothermia (NT, 37 degrees C) and hypothermia (HT, 20 degrees C) and have compared these values with values obtained in dogs during cardiopulmonary bypass (1,200 mL/min). Cerebral tissue blood flow was measured by the hydrogen clearance method. During retrograde cerebral perfusion about 20% of the superior vena caval perfusate was returned through the aorta and the rest drained from the inferior vena cava. Cerebral vascular resistance during retrograde cerebral perfusion was lower than that during cardiopulmonary bypass (NT, 63.8 +/- 52.5 versus 126.9 +/- 58.4; HT, 28.4 +/- 32.8 versus 69.5 +/- 28.7 x 10<sup>3</sup> dynes.s.cm(-5)). Retrograde cerebral perfusion provided half the cerebral tissue blood flow of cardiopulmonary bypass (NT, 14.7 +/- 6.4 versus 34.3 +/- 7.8; HT, 17.6 +/- 5.6 versus 37.2 +/- 10.6 mL/min). Retrograde cerebral perfusion also provided a third of the oxygen (NT, 4.4 +/- 2.1 versus 12.3 +/- 7.1; HT, 1.4 +/- 0.8 versus 4.2 +/- 1.3 mL/min) and discharged 20% of the carbon dioxide (NT, 0.24 +/- 0.08 versus 1.19 +/- 0.58; HT, 0.15 +/- 0.06 versus 0.51 +/- 0.17 mmol/min) when compared with cardiopulmonary bypass. Retrograde cerebral perfusion may reduce ischemic damage during interruption of cerebral blood flow.

Record Date Created: 19920128

File 155:MEDLINE(R) 1966-2003/Jan W4  
 File 5:Biosis Previews(R) 1969-2003/Jan W4  
     (c) 2003 BIOSIS  
 File 73:EMBASE 1974-2003/Jan W4  
     (c) 2003 Elsevier Science B.V.  
 File 34:SciSearch(R) Cited Ref Sci 1990-2003/Jan W4  
     (c) 2003 Inst for Sci Info  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
     (c) 1998 Inst for Sci Info  
 File 144:Pascal 1973-2003/Jan W3  
     (c) 2003 INIST/CNRS  
 File 6:NTIS 1964-2003/Feb W1  
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     (c) 2003 Institution of Electrical Engineers  
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     (c) 2003 Elsevier Eng. Info. Inc.  
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     (c) 2003 ProQuest Info&Learning

Set	Items	Description
S1	315028	STROKE OR STROKES OR TIA
S2	51588	APOPLEXY OR (CEREBROVASCULAR OR VASCULAR) ()ACCIDENT? ?
S3	722604	ISCHEMI? ?
S4	92445	HYPOTHERMI?
S5	619438	COOL OR COOLS OR COOLED OR COOLING
S6	1403685	CATHETER? OR TUBE OR TUBES OR TUBULAR OR TUBING
S7	840702	VEIN? ? OR VENOUS OR VENA OR VENAE
S8	84688	CANNULA?
S9	10897	S7(5N)S8
S10	73	S1:S3 AND S4:S5(S)S9
S11	54	S1:S3(S)S4:S5(S)S9
S12	47	S11 NOT S6
S13	21	RD (unique items)
S14	3	S13/2003 OR S13/2002 OR S13/2001 OR S13/2000
S15	18	S13 NOT S14
S16	18	Sort S15/ALL/PY,D

16/6/1 (Item 1 from file: 144)  
14094165 PASCAL No.: 99-0287584

Characterization of a recovery global cerebral ischemia model in the  
mouse  
1999

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16/6/2 (Item 2 from file: 73)  
10554228 EMBASE No: 2000019506

Mitral valve surgery after previous CABG with functioning IMA grafts  
1999

16/6/3 (Item 3 from file: 155)  
10317508 99306252 PMID: 10379584

Characterization of a recovery global cerebral ischemia model in the  
mouse.  
Apr 1 1999

16/6/4 (Item 4 from file: 144)  
13443657 PASCAL No.: 98-0138120

Rapid active internal core Cooling for induction of Moderate hypothermia  
in head injury by use of an extracorporeal heat exchanger. Commentaries  
1998

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16/6/5 (Item 5 from file: 155)  
09721357 98141285 PMID: 9482181

Rapid active internal core cooling for induction of moderate hypothermia  
in head injury by use of an extracorporeal heat exchanger.  
Feb 1998

16/6/6 (Item 6 from file: 155)  
09199529 97116374 PMID: 8957462

Major extended hepatic resections in diseased livers using hypothermic  
protection: preliminary results from the first 12 patients treated with  
this new technique.  
Dec 1996

16/6/7 (Item 7 from file: 5)  
10056110 BIOSIS NO.: 199598511028

Continuous retrograde cerebral perfusion supplies substances for brain  
metabolism during hypothermic circulatory arrest.  
1995

16/6/8 (Item 8 from file: 155)  
08727673 96089858 PMID: 7488769

Continuous retrograde cerebral perfusion supplies substrates for brain  
metabolism during hypothermic circulatory arrest.  
Jul 1995

16/6/9 (Item 9 from file: 155)  
08476226 95231045 PMID: 7715222

Systemic hypothermia and circulatory arrest combined with arterial  
perfusion of the superior vena cava. Effective intraoperative cerebral  
protection.  
Apr 1995

16/6/10 (Item 10 from file: 155)  
07938997 94075148 PMID: 8253606

Retrograde cerebral and coronary perfusion for acute dissection of Stanford type A with destruction of the right coronary ostia.  
Sep 1993

16/6/11 (Item 11 from file: 5)  
08362095 BIOSIS NO.: 000094102618

HYPOTHERMIC THORACIC AND THORACOABDOMINAL ANEURYSM OPERATION A CENTRAL CANNULATION TECHNIQUE  
1992

16/6/12 (Item 12 from file: 5)  
08017101 BIOSIS NO.: 000093062024

RETROGRADE CEREBRAL PERFUSION THROUGH A SUPERIOR VENA CAVAL CANNULA PROTECTS THE BRAIN  
1992

16/6/13 (Item 13 from file: 155)  
07254912 92186364 PMID: 1545544

Management of the severely atherosclerotic ascending aorta during cardiac operations. A strategy for detection and treatment.  
Mar 1992

16/6/14 (Item 14 from file: 155)  
05808640 88231594 PMID: 3374115

Hypothermia prevents increased capillary permeability following ischemia-reperfusion injury.  
May 1988

16/6/15 (Item 15 from file: 155)  
05390965 87142947 PMID: 3821143

Clinical comparisons of methods of myocardial protection.  
Mar 1987

16/6/16 (Item 16 from file: 155)  
04004637 82282960 PMID: 7114950

Asymmetrical myocardial hypothermia during hypothermic cardioplegia.  
Sep 1982

16/6/17 (Item 17 from file: 5)  
03938640 BIOSIS NO.: 000076024206

ASYMMETRICAL MYO CARDIAL HYPO THERMIA DURING HYPO THERMIC CARDIOPLEGIA  
1982

16/6/18 (Item 18 from file: 155)  
02051257 75117760 PMID: 1117752

The effect of different methods of protecting the myocardium on lysosomal activation and acid phosphatase activity in the dog heart after one hour of cardiopulmonary bypass.

Apr 1975  
?t16/7/3,5,9-11,14

16/7/3 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

10317508 99306252 PMID: 10379584

Characterization of a recovery global cerebral ischemia model in the

mouse.

Sheng H; Laskowitz D T; Pearlstein R D; Warner D S  
Department of Anesthesiology, Duke University Medical Center, Durham, NC  
27710, USA.

Journal of neuroscience methods (NETHERLANDS) Apr 1 1999, 88 (1)  
p103-9, ISSN 0165-0270 Journal Code: 7905558

Contract/Grant No.: RO1 GM39771-12; GM; NIGMS; RO1 NS37235-01; NS; NINDS

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Transgenic/knockout murine variants allow roles of specific proteins to be studied in cerebral **ischemia**. Because of the size of mice, however, study of prolonged recovery from global **ischemia** has been limited. This project characterized an adaptation of the rat two-vessel occlusion model of global **ischemia** for use in the mouse. C57Bl/6J mice (8 weeks old; 21 +/- 1 g) were overnight fasted, anesthetized with halothane, intubated and mechanically ventilated. The right internal jugular **vein** and femoral artery were **cannulated**. Pericranial temperature was held at 37.0 degrees C. The carotid arteries were occluded and mean arterial pressure was reduced to 35 mmHg with 0.3 mg intra-arterial trimethaphan and venous exsanguination. Electroencephalographic isoelectricity was confirmed in cohort mice. Ten minutes later **ischemia** was reversed. Mice were allowed 1, 3 or 5 days survival followed by histologic analysis. Regional cerebral blood flow (CBF) was determined autoradiographically. Outcome effects of intra- **ischemic** hyperglycemia (approximately 350 mg/dl) or **hypothermia** (34 degrees C) were also examined. The mortality rate was less than 10% in all recovery groups. **Ischemia** caused reduction of CBF to < 2% of sham values in cortex, hippocampus, and caudoputamen. CBF was unchanged in thalamus, brainstem and cerebellum. CA1 damage, greater after 3 days vs. 1 day reperfusion, was not further increased at 5 days. Histologic injury was increased by hyperglycemia although seizures did not occur. **Hypothermia** reduced CA1 damage. This study demonstrates feasibility of using the two-vessel occlusion + hypotension recovery model in the mouse. Recovery intervals of > or = 3 days are required to account for delayed CA1 neuronal necrosis. Histologic outcome can be modulated by known physiologic determinants of **ischemic** brain damage.

Record Date Created: 19990728

16/7/5 (Item 5 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

09721357 98141285 PMID: 9482181

**Rapid active internal core cooling for induction of moderate hypothermia in head injury by use of an extracorporeal heat exchanger.**

Piepgas A; Roth H; Schurer L; Tillmans R; Quintel M; Herrmann P; Schmiedek P

Department of Neurosurgery, Faculty of Clinical Medicine Mannheim, University of Heidelberg, Germany.

Neurosurgery (UNITED STATES) Feb 1998, 42 (2) p311-7; discussion  
317-8, ISSN 0148-396X Journal Code: 7802914

Document type: Clinical Trial; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

OBJECTIVE: Moderate **hypothermia** (32 degrees C) may limit postischemic neuronal damage and is increasingly used clinically in head injury and **stroke**. For the use of **hypothermia** as a neuroprotective agent in the prevention of **ischemic** damage, it is necessary to induce it as soon as possible after the insult and to keep it at the lowest safe level. Active core **cooling** using an extracorporeal heat exchanger may circumvent the rather slow induction speed and temperature drifts experienced with surface **cooling** techniques. METHODS: In eight patients with severe head injuries (Glasgow Coma Scale score, 4-5), a venovenous extracorporeal circulation was established via a percutaneously introduced double-lumen **cannula** in the femoral **vein**. A heat exchanger was connected via a

pressure-controlled roller pump. In addition to standard parameters, brain white matter temperature was continuously recorded as the target temperature. **Cooling** was initiated as early as possible with an extracorporeal temperature of 30 degrees C and maintained at a 32 degrees C brain temperature for 48 hours, and then gradual rewarming for 24 hours. RESULTS: **Cooling** was able to be initiated within 6 hours and 48 minutes +/- 3 hours and 47 minutes (mean +/- standard deviation) after trauma. A brain temperature of 32 degrees C was reached within 1 hour and 53 minutes +/- 1 hour and 21 minutes after induction of **cooling** with a **cooling** speed of 3.5 degrees C per hour. Brain temperature was able to be controlled within 0.1 degrees C intervals, which was especially helpful in gradual rewarming. No cardiac abnormalities or statistically significant changes in coagulation parameters occurred. Mean platelet count decreased to 89,614 +/- 42,090 on Day 3 after treatment. No clinical bleeding complications or problems resulting from extracorporeal circulation occurred. Moderate **hypothermia** was a helpful tool for managing increased intracranial pressure; however, five patients of this series died either of their intracranial abnormalities (n = 4) or of a delayed septic shock after pneumonia (n = 1) at various points in time during therapy. The three survivors experienced either an excellent or a good recovery. CONCLUSION: The results of this investigation suggest that the use of an extracorporeal heat exchanger to achieve active core **cooling** is suitable for fast and accurately controllable induction, maintenance, and reversal of moderate **hypothermia** in emergency situations with reliable control of temperature. In this small series of highly selected patients with severe head injuries, we did not note a beneficial effect of **hypothermic** therapy on outcome.

Record Date Created: 19980402

16/7/9 (Item 9 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

08476226 95231045 PMID: 7715222

**Systemic hypothermia and circulatory arrest combined with arterial perfusion of the superior vena cava. Effective intraoperative cerebral protection.**

Lytle B W; McCarthy P M; Meaney K M; Stewart R W; Cosgrove D M  
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Journal of thoracic and cardiovascular surgery (UNITED STATES) Apr 1995  
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We have used retrograde arterial perfusion of the superior vena cava as an adjunct to deep **hypothermia** and systemic circulatory arrest for intraoperative cerebral protection in 43 adult patients (18 of whom were 70 years old or older). The indications for the use of circulatory arrest were thoracic aortic operations (37 patients) and atherosclerosis or calcification of the ascending aorta (6 patients) in patients needing aortic valve or coronary operations. In all patients systemic **hypothermia** (16 degrees to 18 degrees C) was achieved with cardiopulmonary bypass and the systemic arterial circulation was arrested. Retrograde arterial perfusion of the superior vena cava was established through a wire-reinforced **venous cannula** (with a superior **vena cava** tourniquet) at a temperature of 15 degrees C. In 36 patients a separate roller pump system was used for the retrograde cerebral perfusion. Central venous pressure was monitored at 25 to 30 mm Hg; mean flow rate was 250 ml/min. Periods of circulatory arrest and retrograde cerebral perfusion ranged from 4 to 110 minutes (mean 38 minutes), and for seven patients the period of circulatory arrest was longer than 60 minutes. Four postoperative deaths occurred, one related to **stroke** in a patient who had an aortic dissection during coronary surgery and the others related to noncerebral complications. Three nonfatal cerebral complications occurred, although all had completely resolved by late follow-up. Advantages of retrograde cerebral perfusion are (1) simplicity of use and avoidance of vascular



trauma, (2) excellent exposure, (3) retrograde flow that minimizes embolization of air and atherosclerotic debris, and (4) effective cerebral oxygen delivery. Retrograde cerebral perfusion appears to be an important adjunct to **hypothermia** and circulatory arrest not only for patients undergoing operation for ascending aorta and aortic arch disease but also for patients with diffuse aortic atherosclerosis undergoing coronary or valve operations.

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16/7/10 (Item 10 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

07938997 94075148 PMID: 8253606

**Retrograde cerebral and coronary perfusion for acute dissection of Stanford type A with destruction of the right coronary ostia.**

Sueda T; Hayashi S; Nomimura T; Kurisu Y; Orihashi K; Shikata H; Matsuura Y

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Hiroshima journal of medical sciences (JAPAN) Sep 1993, 42 (3)  
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Repair of acute aortic dissection with destruction of the right coronary ostia and aortic valve regurgitation is described. The patient was a 54 year-old female with Marfan syndrome, who was admitted to our hospital for acute dissection with annulo aortic ectasia, accompanied by myocardial **ischemia** of the inferior wall. Retrograde dissection to the aortic annulus and destruction of the right coronary ostia due to extended dissection were noted. Retrograde coronary infusion through the coronary sinus was conducted during replacement of aortic annulus by the Cabrol method in conjunction with supplementary vein grafting to the right coronary artery. Distal repair was carried out, supported by **hypothermic** circulatory arrest and retrograde cerebral perfusion through the superior **vena** caval **cannula**. Retrograde cerebral and coronary sinus perfusion have been shown to be quite effective for treating patients requiring complex reconstruction of the ascending aorta.

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16/7/11 (Item 11 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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**HYPOTHERMIC THORACIC AND THORACOABDOMINAL ANEURYSM OPERATION A CENTRAL CANNULATION TECHNIQUE**

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JOURNAL: ANN THORAC SURG 54 (2). 1992. 253-258. 1992

FULL JOURNAL NAME: Annals of Thoracic Surgery

CODEN: ATHSA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Surgical resection of the descending thoracic and thoracoabdominal aorta is associated with the risk of spinal cord **ischemic** injury, particularly in patients with aortic dissection. **Hypothermic** total cardiopulmonary bypass with periods of circulatory arrest has been advocated for spinal cord protection with encouraging early results. However, techniques for this procedure are relatively complex. An alternative **cannulation** technique with **venous** return from the right atrium through the internal jugular vein and arterial return to

the aortic arch is described. This has been used in 6 patients for replacement of the descending thoracic or thoracoabdominal aorta. Despite profound **hypothermia** and preservation of the principal spinal radicular artery, 1 patient suffered early paraparesis with some recovery but eventually died of multisystem failure. A second elderly patient with severe obstructive airways disease died of respiratory failure 11 days postoperatively. Four patients made a good recovery including 1 with a ruptured thoracoabdominal aneurysm who subsequently required gut resection for **ischemic** necrosis present preoperatively. This cannulation technique together with profound **hypothermia** has greatly improved the operating conditions for extensive aneurysms of the thoracoabdominal aorta. Paraparesis occurring despite **hypothermic** protection and attempted preservation of the spinal cord arterial supply suggests that unfavorable vascular anatomy still predominates in the risk factors for **ischemic** injury.

16/7/14 (Item 14 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

05808640 88231594 PMID: 3374115

**Hypothermia prevents increased capillary permeability following ischemia-reperfusion injury.**

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Department of Surgery, University of South Alabama, Mobile 36609.

Journal of surgical research (UNITED STATES) May 1988, 44 (5)  
p514-21, ISSN 0022-4804 Journal Code: 0376340

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Severely injured trauma victims are frequently **hypothermic**. It is unclear, however, whether **hypothermia** itself is a detrimental or protective physiologic response to injury. One of the major consequences of fluid resuscitation following **ischemic** injury is edema formation, characterized by **ischemia**-reperfusion injury models. The purpose of this study was to examine the effect of regional **hypothermia** on a feline intestinal model of **ischemia**-reperfusion injury. An autoperfused segment of cat ileum was isolated and arterial, **venous**, and lymphatic vessels were **cannulated**. Lymph flow (Ql), lymph (Cl), and plasma (Cp) protein concentrations and segmental blood flow (Qb) were measured. Permeability changes were characterized by the minimal Cl/Cp ratio obtained by elevating venous outflow pressure. Animals were divided into the following groups: Group I: 1 hr of intestinal **ischemia** (30 mm Hg) with autoreperfusion; Group II: 1 hr of intestinal **hypothermia** (28 degrees C) with subsequent rewarming; Group III: 1 hr of combined **ischemia** and **hypothermia**. Group III animals were either kept **hypothermic** (IIIA) or rewarmed (IIIB) during autoreperfusion. Minimal Cl/Cp ratios (mean +/- SEM) were as follows: Control: 0.15 +/- 0.02; Group I\*: 0.32 +/- 0.03; Group II: 0.15 +/- 0.01; Group IIIA: 0.18 +/- 0.02; Group IIIB\*: 0.42 +/- 0.02; (\* = P less than 0.01 vs control). Reperfusion flow rates were no different between Group IIIA and Group IIIB animals. **Ischemia**-reperfusion, but not **hypothermia** alone, caused a marked increase in intestinal capillary permeability. Permeability increased after combined **ischemia** and **hypothermia** only if reperfusion was accompanied by rewarming. **Hypothermic** reperfusion protected against the increased permeability following **ischemia**.

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**Radiant Medical Announces Approval of Stroke Clinical Trial With New  
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March 20, 2001  
Word Count: 838

14/6/2 (Item 1 from file: 149)  
01912504 SUPPLIER NUMBER: 62741366 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The Effects of Hypothermia on Coronary Artery Bypass Graft Surgery.**  
2000  
WORD COUNT: 4054 LINE COUNT: 00370